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[Authors alone are responsible for the contents of their respective Papers.]

SECRETARY'S NOTES.

1. The following officers became members of the Institution during the month of June:—

Captain W. H. Bunbury, R.E.
Surgeon-Major W. J. Rendell, late A.M.S.
Captain M. C. Haines, 1st V.B. Royal Fusiliers.
E. Venning, Esq., late Surgeon, 1st Life Guards.
Major F. R. Hicks, Hampshire Regiment.
Lieutenant H. Leigh, R.N.
Lieutenant D. M. Anderson, R.N.
Second-Lieutenant F. W. Gore-Langton, Coldstream Guards.
Second-Lieutenant E. B. Trafford, Scots Guards.
Second-Lieutenant E. C. T. Warner, Scots Guards.
Second-Lieutenant D. F. P. Wormald, Coldstream Guards.
Second-Lieutenant R. G. Wavell-Paxton, Coldstream Guards.
Second-Lieutenant E. P. Orr-Ewing, Scots Guards.
Second-Lieutenant C. Bewicke, Scots Guards.
Second-Lieutenant B. C. R. Loder, Scots Guards.
Lieutenant J. Egerton-Warburton, Scots Guards.
Lieutenant R. Steuart-Menzies, Scots Guards.
Assistant-Engineer A. Robertson, R.N.R.
Captain S. M. Castle, Royal Garrison Regiment.
Captain E. B. Scott, R.G.A.
Lieutenant Lord N. E. Crichton-Stuart, Scots Guards.
Second-Lieutenant H. G. Richards, Cardigan R.G.A. (M.).
Major H. B. Murray, Indian Army.
Colonel H. F. M. Wilson, Rifle Brigade.
Sub-Lieutenant F. V. Wilson, R.I.M.
Major E. L. C. Berger, Indian Army.
Lieutenant G. Gipps, R.N.
Colonel T. G. L. H. Armstrong, late Northumberland Fusiliers.

(No officer of the Imperial Yeomanry joined the Institution during the month.)

2. The Building will be closed for the Annual Cleaning from 14th August to 31st August inclusive. The Museum will be open as usual.

3. His Imperial Highness Prince Arisugawa of Japan visited the Museum on the afternoon of Wednesday, 28th June, and inspected the Nelson Relics.

4. Their Royal Highnesses the Duke and Duchess of Connaught and Princess Patricia were present at the Reception held by the Chairman and the Council on the evening of Thursday, 29th June. Over twelve hundred members and guests attended, and the evening proved a great success.

5. The Council regret to have to record the death of Major-General M. Protheroe, C.B., C.S.I., a valuable member of the Council, and Chairman of the Museum Committee.

6. The Council also regret to report the death of Colonel F. C. Trench Gascoigne. Colonel Gascoigne, in addition to presenting a sum of £5,000 to the Institution, had also made numerous gifts to the Museum.

7. The Secretary has pleasure in reporting that during the past six months there has been a substantial increase in the membership of the Institution, and he hopes that members will use their influence in persuading officers, especially the younger ones, to join.

8. Captain Arthur M. Field, R.N. (Hydrographer of the Navy), has been appointed a member of the Council, vice Admiral Lord Charles T. M. D. Scott, G.C.B., resigned.

THE MILITIA IN 1905.

*By Colonel Lord RAGLAN, Commanding Royal Monmouthshire
Royal Engineers (Militia).*

Wednesday, 22nd February, 1905.

General Sir R. HARRISON, G.C.B., C.M.G., Colonel Commandant
Royal Engineers, in the Chair.

IT is just eight years since I had the honour of lecturing on the Militia in this hall.

Many things have happened since 1897, much that we all foresaw and much that was unexpected.

The total abolition of the Militia has been proposed by the Secretary of State for War, and though this drastic step is apparently postponed, the mere fact that it can be seriously brought forward, shows how utterly the services of the Militia during the South African War have been forgotten since its termination, as they were ignored at the time.

I propose in this lecture to confine myself to discussing the past history and present position of the Militia as it now exists, to refer to any changes that have been made in the last 8 years, and to make certain suggestions which I believe will be for the advantage of the Force, and which can be carried out at comparatively small expense. The question of compulsory Service I shall not deal with, though I believe that some form of it must eventually be adopted.

SERVICES DURING THE WAR.

When I lectured in 1897, the manœuvres in 1896 had brought the Militia into notice for the first time for many years, and the latent possibilities of such a Force were further shown in the large manœuvres of 1898.

When the war broke out in 1899, a Militia battalion was at once embodied of each territorial regiment which had both its Regular battalions abroad. This embodiment was extended as fresh troops were dispatched to South Africa, until on 1st May, 1900, the whole of the Militia was embodied for the first time for 46 years. In fact, the embodiment was more complete, as certain units were not called up during the Crimean War. Meantime, in the autumn of 1899, the Militia Reserve of many regiments had been called up and incorporated with Regular units—mostly their own Line battalions, but in some cases with other regiments.

Early in 1900 a further development took place. When the war broke out, as has always been the case, the Militia commenced to volunteer for service abroad, and many battalions as complete units embarked both for the Mediterranean and for South Africa.

In October, 1900, those units who were embodied at home were gradually disembodied until almost all the Militia had been so treated.

Meantime a very large number of Militia officers were doing duty, both at home and abroad in every sort of position, and we do not hear of them in any way failing to carry out the various duties entrusted to them; in fact, towards the end of the war, the entire work of the dépôts, and of many minor staff appointments, both in South Africa and at home, was being carried out by Militia officers.

In 1901, many Militia units provided mounted infantry detachments for South Africa, and we do not hear of them being otherwise than satisfactory.

By 1901 the Militia battalions in South Africa had naturally wasted very considerably, and it seemed unfair to keep these men out longer, if they could be replaced; more especially as other troops, such as C.I.V., the Volunteer Service Companies, and the Yeomanry had been brought home. Certain battalions were embodied, and asked to volunteer for South Africa, and with one exception they all responded and were embarked for the seat of war. Here is an object lesson in the value of the Militia. At the end of a long and tedious war, when little honour was to be gained, and much hard and uninteresting work remained to be done, when all early enthusiasm had evaporated in most quarters, and when it proved impossible to raise more than 1,500 Volunteers for the Service companies, the Militia cheerfully volunteered to embark for active service.

I need scarcely add that these battalions received no reward of any description.

During the war the following services were performed by the Militia:—

1900.

EMBARKED FOR SOUTH AFRICA.

- 4 Artillery Companies.
- 2 Engineer Companies.
- 2 Engineer Sections.
- 30 Battalions of Infantry.

EMBARKED FOR MEDITERRANEAN AND ST. HELENA.

- 5 Battalions of Infantry.

1901.

EMBARKED FOR SOUTH AFRICA.

- 2 Artillery Companies.
- 1 Engineer Company.
- 15 Battalions of Infantry.

EMBARKED FOR MEDITERRANEAN AND ST. HELENA.

- 4 Battalions of Infantry.

1902.

EMBARKED FOR SOUTH AFRICA.

- 15 Battalions of Infantry.

In all 16 artillery and 3 engineer companies, and 2 sections, and 68 battalions, composed of 1,691 officers and 43,875 of other ranks, were employed abroad during the war. There were also 13,598 Militia Reserve men incorporated with the Regular Army, making a total of 59,164 of all ranks.

Besides these a very large number of Militia officers did duty with Regular units and in various staff appointments in South Africa, and a considerable number of non-commissioned officers and men volunteered for mounted infantry, and were incorporated in the companies raised and sent out towards the end of the war.

I may also remark that during the war 2,760 Militia officers were given commissions in the Regular Army—an acceptable addition of men with some military knowledge which could not have been provided from any other quarter, and 40,755 Militiamen enlisted in the Regular Army.

The strength of the Militia on 1st October, 1899, was 3,234 officers, and 102,073 other ranks, and I should like to point out, that out of this Force more men served in the war than were provided by the Yeomanry, Volunteers, and oversea colonials put together.

I have briefly sketched the services rendered by the Militia during the year. Little credit has been given for them by the nation. The very grave material losses which embodiment for long periods inflicted on many officers and men, and the serious inconvenience, to say the least of it, to all, have been ignored.

It seems now to be taken for granted that it is the business of the Militia to volunteer for foreign service. When the Yeomanry and Volunteers went to the war, praise was lavished upon them—no more than was due—but the fact that the officers and men of the Militia undertook this duty equally of their own free will, and in vastly larger numbers, was accepted as a matter of course, and their rewards have been proportioned to their popularity.

What neither the public nor the press nor the Government seems to grasp is, that this despised Force was the only branch of the Service that was able to provide of itself complete units for active service, that it sent 60 battalions and many detachments to the war besides many battalions to St. Helena and the Mediterranean, and that in addition it garrisoned the country at a time of great anxiety, when the other Auxiliary Forces were unable to render any assistance, even to the extent of training for a month.

SUGGESTIONS FOR IMPROVEMENTS.

I propose now to give a sketch of our chief wants and deficiencies and make some suggestions for their removal. Many of them I have brought forward on previous occasions, but time has only confirmed my belief in them, and whatever form the home Army of the future may take, the same puzzles will confront the reformer, until the Gordian knot of our difficulties is cut by the re-introduction of some form of Compulsory Service.

PROVISION OF OFFICERS.

Beyond extending to subalterns of the Regular Army, the system of half-pay for 10 years' service in the Militia, and making all officers who entered the Army after a certain date liable to service

in the Militia; little has been done towards remedying the deficiency of officers, our great and crying want. Neither the War Office, whose business it would naturally be supposed to be, nor the lords-lieutenant, whose position was created for the purpose, nor the deputy-lieutenants, who are the officers of the Militia, seem to consider it their work to see that the Militia is officered. The War Office wrings its hands in despair (when it happens to think of the matter), the local officials in most cases do not even pretend to care. The commanding officer is left to get officers. Nobody cares whether he does, or does not. A commanding officer may sit waiting for Providence to send down officers from Heaven till he has none left; but no one minds. On the other hand, he may pester all his friends, he may write to everyone who has a son or a nephew, and may fill up his officers' ranks, but still nobody cares. The same thing applies to men. He may have a 1,000 men, or a 100, neither the War Office, nor the Government, nor the Press, nor the country cares a button.

Officers can only be obtained in two ways: they must be compelled to serve, or the Service must be made worth their while.

As regards the first, Army candidates are the only people the Government can put pressure on.

All officers should enter the Army through the Militia. That will provide some 1,500 subalterns. Of these a large number will not pass the Army examination. Some of these will remain on in the Militia. Meantime all will be giving service to the country, and when war breaks out, there will be a large number of young men, partially trained, who will be available to fill gaps in the Regular Army. It may be objected that you will deprive your Militia of many officers when they are most needed. In 1897 I pointed out here that a vast number of officers would be required for the Army in any great war. Events have proved the correctness of my statement, for during the war, 2,760 Militia officers were gazetted to the Regular Army. Now, if the officers' ranks were full, the effect of such a depletion would be minimised, and we must recognise the following facts:—1. The foreign service Army must always be the chief object of military administration, above all in time of war. 2. The foreign service Army will always require many officers on mobilisation. 3. They will be taken from wherever they can be obtained, and subalterns, with any experience, can only be found in the Militia.

We now come to Militia officers proper, *i.e.*, those who are not candidates for the Army.

They may be divided into four classes:—

- a. The man with property, large or small.
- b. The professional man.
- c. The man with a small independence.
- d. The man looking out for something to do.

A Militia training interferes to a different extent with each of these classes. It may be, and very often is, very inconvenient to a man with a property or in a profession to come out on a hard and fast date, and in many cases of the latter class, means giving up the only annual holiday to soldiering. With all classes of officers it is certain that business or pleasure must be largely interfered with.

Some may say:—"Why not interfere with pleasure?" My answer is:—"Why should A go into the Militia and give up his grouse-shooting as my officers have to do, while B and C do nothing?"

I say that the Militiaman of every sort deserves to be encouraged, whether he gives up his business or even his pleasure, to try and serve his country.

With regard to encouragement. It must take the shape of cash or kind. Many more officers of classes *c.* and *d.* would join the Militia if there were a certainty of more employment. I think that Militia recruits at the dépôts should always be trained by their own officers. If a major, a captain, and two or three subalterns were always employed at the dépôt of each unit, the gain would be immense, not only in the direction of encouraging officers to join, but in the increased efficiency of officers, and consequently of the Militia generally.

Militia officers should be exempted from all juries, and, while serving, from the office of high sheriff; so many years' service should excuse for life from this office. I would suggest exemption from game licence, and from licence for a male servant. All military or semi-military posts throughout the Empire, that are not filled by officers of the Navy or Army, should be reserved for Militia officers.

For instance, why should not the competitive examinations for the Indian Police, and similar bodies, be confined to officers of the Militia? It would not cost the country anything, and some knowledge of military matters would be of great advantage both to the candidates themselves, and to the forces they will serve in.

I would even go so far as to say that every Government post throughout the Empire which carries with it the command of men, should be kept for competition among Militia officers, except where such posts are reserved for officers of the Navy or Army.

Over and above this there comes in the question of pay. At present a Militia officer's pay covers his expenses, and leaves him something to the good, on two assumptions:—1. That he is not taken too constantly away from his headquarters. Even to move a mess from headquarters to a standing camp is very costly in breakages, and extra expense, and in the event of a battalion attending manœuvres, it may easily run into a large sum of money. 2. That his unit is fairly complete in numbers. It must be apparent that in every mess there are certain standing expenses that must be incurred, whether there are 10 dining members or 30, and when the officers of a unit are few the standing expenses are a heavy tax on their pockets.

Besides, however, the question of pay in the training, the general expenses of a Militia commission have to be considered. Apart from the first cost and subsequent upkeep of uniform, which, in spite of the abolition of gold lace, are just as heavy as ever, there is the old grievance of changes which no one either inside of outside the War Office seems able to prevent.

A new kit every few years, and constant intermediate changes, appear to be as inevitable as death or the tax gatherer, and should be taken into consideration.

I am frequently asked what an officer gets in the Militia. I reply:—"He gets enough pay to cover his expenses when out for training, and may make a little over, say, £1 a week, though he can

seldom cover the cost of his uniform." But when the would-be officer says:—"What else?" All I can reply is:—"Nothing else." This applies still more to a parent or guardian who is apt to look at money matters a little closer than the ordinary youth, and who always asks what the expenses and the receipts will be.

As we hold ourselves in readiness to soldier at a moment's notice, we ought to get some sort of retaining fee, I would suggest £25 per annum as a trial sum.

I feel sure that this would make a great difference; the mere fact that there was a substantial bonus over and above the cost of living for a few weeks would encourage young men to join.

Besides this, an officer should receive travelling allowances and expenses, to and from his *bonâ fide* place of residence to the headquarters of his unit, when called up for any military duty.

More than these suggestions I am unable to make, but can only add that if the country wants Militia officers it must pay for them in some shape or form.

TRAINING OF OFFICERS.

In this direction some progress has been made, of late years, in increased number of classes, and more pay for attending them; but these classes are still insufficient, and too much hedged round by delays and difficulties. Of course, during the war few classes were held, but there has been unnecessary delay in carrying out the new regulations. For instance, last September was the first class held at Chatham for Engineer Militia since 1899, so no engineer officer has had an opportunity for more than 5 years to obtain his *p.s.* certificate, to say nothing of increased knowledge of his work.

Hythe is still difficult to get to. In fact, I am informed that only 23 vacancies are allotted to the Western District for 1905, so that few Militia officers can hope to obtain a Hythe certificate, and therefore, few can qualify for promotion.

Vacancies at classes in general are far too few and too difficult to obtain. The same suggestions I made years ago still want carrying out, namely, that certain classes should be held at certain times, that they should be held whether 1 officer attends, or 100, that every officer should be able to go upon giving notice to the commandant of the School, provided that he has a certificate signed by his commanding officer entitling him to attend such class or classes. Should there be no room in barracks an officer can be given lodging allowance; but the important thing is, that classes should be held on fixed dates, and that all qualified officers should be able to attend at short notice.

Apart altogether from classes, an officer should learn the ground-work of his business with his own unit. The training is short, but much can be done by making the most of the time available, if the commanding officer is given a free hand.

Wherever preliminary drill is held, I should like to see all officers who are available allowed to attend. Under the senior officer present valuable work could be done, and the instructor would learn as well as the pupils.

Training Militia officers is largely a question of money. If sufficient pay and allowances are granted there will always be plenty of officers to avail themselves of opportunities, but over and above

this, some system of reward, monetary or otherwise, should be devised to encourage those who can spare the time, to study.

A commanding officer ought to be able to train his officers if he is fit for his position, but under present circumstances it is hard to hold him responsible for work which he has neither time nor opportunity to carry out properly.

PERMANENT STAFF.

Since 1897 the rank of warrant officer has been restored to Militia sergeant-majors, though there is still a slight and quite unnecessary difference in the pay between them and sergeant-majors of Regular units.

Non-commissioned officers serving on a Militia engagement have had their pay and most of their allowances raised to those of the corresponding ranks serving on an Army engagement.

Here again a few half-pence have been saved by not raising all the allowances—why this trumpery difference was preserved, except for the purpose of giving trouble in pay-sheets and creating discontent, I know not.

Some additions have been made to the permanent staff, but it is not yet as regards numbers what I should like to see.

With regard to their appointment, I again would wish to impress on commanding officers of Regular units the vast importance of sending good men. This necessity is self-evident, and but for the fact that commanding officers of Line battalions are unable to make up their minds to send good non-commissioned officers to their own depôts, it would seem needless waste of time to emphasise it. The Militia being the great feeder of the Army, the importance to the latter of their being trained carefully is evident, and one would think self-interest would induce the Regular Army to send us trustworthy and competent men.

MILITIA NON-COMMISSIONED OFFICERS.

The Militia non-commissioned officer is still one of our great difficulties. During the war his pay was raised to the pay of corresponding ranks of the Regular Army—an act of justice to which he had long been entitled. Nevertheless, I fear there has been less improvement than one could wish, though the long embodiment and the habits of discipline thereby engendered have produced considerable effect. Still, the fact remains that the Militia non-commissioned officer is not satisfactory. Moreover, he occupies a difficult and thankless position, and it is not easy to see how it can be altered.

I should like to see all non-commissioned officers given an extra bounty if recommended by their commanding officer. Any man who has served creditably as a Militia sergeant should get a deferred pension at 60 or 65. The travelling expenses of a Militia non-commissioned officer should be paid to and from his headquarters wherever he resides. The further off he lives from the men the better, and I still believe that old soldiers who settle in the great towns would be glad to join the Militia of their native counties provided they could get their journey paid both ways and were not obliged to leave after training, but could stay and see their friends, being sup-

plied with undated tickets for this purpose. I still wish a Commanding Officer had the power occasionally to put a Militia sergeant on to the permanent staff. It would be the best way to reward a really good man.

Non-commissioned officers from the Army should be allowed to qualify for a full pension by service in the Militia—say two years' Militia service, equal one year in the Regular Army.

All non-commissioned officers should be allowed to come up before the men and leave after them, should they so desire, receiving pay and allowances for the extra days. As a further protection to non-commissioned officers all Militiamen should be under the Army Act all the year round, so that if any man assaulted a non-commissioned officer in the non-training he could be tried by court-martial. I need scarcely add that non-commissioned officers should be made much of, and kept as separate from the men as possible.

Sergeants, and I think corporals as well (as is done in the Royal Engineers and in my regiment) should be in the sergeants' mess.

In any case there should be a corporals' room, so that these non-commissioned officers should not have to use the canteen with the privates.

TRAINING OF NON-COMMISSIONED OFFICERS.

It is manifestly impossible to give any large amount of instruction during the training to non-commissioned officers. Much might be done by allowing all non-commissioned officers to attend the whole of the preliminary drill, when they could be given some consecutive instruction. It will always be necessary, however, to attach non-commissioned officers to Regular units, for the purpose of teaching them more than can be learned with their own corps. May I impress on all whom it may concern the importance of giving really good instruction, and also of treating these men with consideration and tact? They are not Regular soldiers, their knowledge of their duties and responsibilities must of necessity be limited, and having no valuable position to maintain they are not always disposed to work hard for examinations nor to behave themselves as their rank demands.

May I also suggest that comfort has no small effect on men of all classes, and that both physical and moral comfort should as far as possible be provided for these non-commissioned officers, who, after all, are not making a living out of soldiering, and who, in many cases, do not receive as much pay as they earn in civil life?

One thing I am very glad of, namely, that a Long Service and Good Conduct Medal has been granted to the Militia. It has always seemed a pity to me, from the recruiting point of view, that a man has nothing to show for his service in the Militia, however long or exemplary, and I know this grant will be appreciated. I wish it could be given to men who have left, if recommended by the commanding officers of their respective units, partly as a reward for past good conduct, but even more as an advertisement for the Militia, and I should like to see service in the Navy and Army allowed to reckon towards the requisite time. We want to encourage old soldiers of good character to enter the Militia, where they are of great value, and the prospect of qualifying for a Good Conduct Medal would be an additional inducement.

RANK AND FILE.

Mr. Brodrick, when Secretary of State for War, made a substantial addition to Militia bounties. Bounties are now given in the winter at a time when many men are out of work, and when the money is most useful. Some people feel disappointment that this increased bounty has not as yet produced a great effect on the numbers. For one thing, we cannot guess what would have been the result had the bounties remained the same. On the other hand, it takes a long time for any improvement in the conditions, even of the Army, to sink into the minds of the recruit-giving classes, and it takes far longer in the case of the Militia. Militiamen, I regret, are not given to boast of their connection with the Force. Employers of labour do not invariably encourage Militiamen, or anyhow, the men think they don't, and public opinion is not in favour of them, so the best men do not say much about it, and consequently still more time is required to enable the recruiting classes to thoroughly grasp the additional money to be received.

From what I hear, men who have left, in some cases for years, are re-enlisting, especially in the agricultural regiments, and more than one battalion which was dying out has taken a fresh lease of life.

Recruiting is the whole crux of a voluntary force, and is more difficult in the case of the Militia than even the Regular Army.

It seems to me that some determined effort should be made to grapple with the difficulties and the discrepancies of recruiting.

Why should Lancashire, which 25 years ago had fewer Militiamen than Yorkshire, now have three times the number, the proportion of their respective populations remaining the same?

The falling off of the 3rd Cornwall Light Infantry from 900 to 200 in 40 years is perhaps to be accounted for by the closing down of many mines, but no conceivable explanation can be given for an almost similar fall in Derbyshire or in North Wales.

In London little or nothing is done to recruit the Militia. One Tower Hamlet battalion, 900 strong, in which the whole of the men came from the immediate neighbourhood of headquarters, has been destroyed by being removed to Woolwich, thereby putting a navigable river between it and its recruiting ground, while a similar fate threatens the other. The East-End of London hears nothing of the Militia. Men will not walk to Hounslow or even to Trafalgar Square to inquire about an unknown force. The consequence is that this vast hive of casual labourers provides few recruits for the Militia, except those men, who, failing to pass the physical tests for the Army, enter the Militia to feed up the required standard.

Recruiting depends much on regularity and convenience of date of training. I know one London battalion which trained on a definite date for years. Men were thus able to make arrangements in ample time to get away from their work, and the regiment was full of most respectable men—cabdrivers, stevedores, small shopkeepers, etc., who all left when the training became variable. I know another case where most of the best men of an East Anglian Militia purchased their discharge because the battalion was ordered to manœuvres. As these men depend entirely on their harvest wages to balance their annual budgets, nothing short of a £10 bounty can make up to them for being called out in August.

Regiments should not be taken away from their headquarters too frequently. It is a curious commentary on our system of government by extremes that eight years ago I earnestly pressed for the more frequent training of Militia at camps of exercise, pointing out that some corps had not left their headquarters since 1814. Since then we have sprung to the other extreme, and regiments have been so hustled the last few years that the men have been disgusted. Recruiting has consequently fallen off and waste increased.

Not more than once in three years at a camp of exercise should be the rule, and increased recruiting will respond to increased comfort. Here perhaps I may be permitted to say one word with regard to training. Let the Militia walk before they try to run, and do not let us lose altogether the chance to learn that amount of steady drill, which is required, not only for disciplinary reasons, but to actually move bodies of armed men, whether on the line of march or in the field, if they are not to dissolve into a helpless rabble.

To return to recruiting, much depends on the sergeants employed on that duty. It is distasteful to some, but others like it, just as one man will hardly get a recruit where another man will get many.

It is very largely a question of money, and I feel sure that the rewards now given are not sufficient. If a recruiter does not get several recruits a day he is out of pocket. This produces bad results in two ways. All sergeants have to be sent out in their turn in order to equalise the loss—this is a waste of time in the case of men who are not good recruiters, and, secondly, the smaller towns and country districts are practically untapped.

You cannot ask a non-commissioned officer to remain a long period in a place where he gets no recruits, and the inhabitants seldom seeing a recruiting sergeant, the thing goes on in a vicious circle.

I should like to see good recruiting, whether by officers or non-commissioned officers, well rewarded, both pecuniarily and by promotion, and the whole question thoroughly taken up and the anomalous results investigated.

Again, more endeavours should be made to stop waste. This arises from two causes, purchase and desertion. As regards the first, I should like to try enlisting men for six years, as now, during which, however, they should only be obliged to attend four trainings, viz., the first two and then two out of the next four. This would give greater elasticity and would tend to stop waste, besides providing a reserve for the Militia. Should a man wish to re-engage, he should do so for four years, out of which he should do the first two trainings and one in the next two years. In this way a man could put in ten years' service, during which he would only be compelled to do seven trainings.

In this connection, power should be taken to render all Militiamen liable to an extra year's service in time of national emergency, as is done in the case of the Regular Army. The want of this was much felt during the war.

Recruiting posters should be less complicated, and should set out more clearly what a Militiaman is called upon to do and what he gets for it. More stress should be laid on the ease and cheapness with which discharge can be purchased—men thus feeling less tied would more readily enlist.

The desertions from the Militia are disgraceful, and the small percentage of absentees arrested shows great idleness on the part of the

civil police, especially in London, where the number of absentees seldom falls below 15 per cent. of strength in any unit.

Regiments with bad records in this respect should be in turn thoroughly taken in hand, a few good detectives should be employed, and all the deserters arrested. Men would get out of the habit of staying absent, for it is, in nine cases out of ten, only a custom which obtains in some units, while others recruited under identical conditions have hardly any absentees. It would pay the country well to offer a reward of £5 for every Militia absentee arrested. The expense to the country and the trouble these men give is incalculable, and the whole thing is perfectly preventible, if the War Office would take the matter up with determination.

ORGANISATION.

The variation in strength of the different Militia units is bad for efficiency, and disastrous from the point of view of higher organisation.

There are battalions of infantry varying from 12 to 4 companies and from 1,200 to 200 men. This is made worse by the fact that the industrial counties, which provide the strong battalions, provide but few officers, while the agricultural regiments, which have more officers, have often very few men.

It is impossible that skeleton battalions can be preserved with advantage either to themselves or to the country, and the matter should be taken in hand at once with the view of giving all battalions the same establishment. It can be done in two ways—by amalgamation of weak units, or by allowing extra-territorial recruiting. I should suggest a combination of the two. Time is too short to go into detail, but I see no reason why the Border Militia should not be permitted to recruit in Durham or Lancashire, the Shropshire in Stafford or the Hampshire and Berkshire in Surrey. Amalgamation, with the abolition of many of the artillery regiments, is, I am afraid, the only possible course to be pursued in Ireland.

RE-ORGANISATION INTO FOUR-COMPANY BATTALIONS.

Another suggestion I would press most earnestly on the Militia authorities is the re-organisation of the Militia into four-company battalions. I have personal experience of its advantages, as in 1902 this organisation was given to the Engineer Militia. Each company would consist of 1 major, 1 captain, 3 subs, 6 permanent staff, and the proportion of Militiamen; all companies are thus commanded by senior and experienced officers. The advantage as regards non-commissioned officers is immense. Everyone is aware of the difficulty of getting a colour-sergeant who is at once a good drill and a good accountant. Under the suggested system, each company has a company sergeant-major and a company quartermaster-sergeant. The first attends to drill, parade work, and discipline; the second to pay, messing, and the company lines. If the pay of both ranks is equal, as in the Engineer Militia, it is not particularly important which is the senior, and the C.O. can place the non-commissioned officers according to their qualifications. It is of great assistance to the C.O. of the company to have an experienced non-commissioned officer who can be left off parade, and thus has ample time for the pay-sheet, and can superintend the cleanliness of the lines, and the issue, cooking,

and serving of the men's food. Believing, as I do, that comfort in camp and goodness of food are far more important, than a few pence more or less in pay, a substantial stimulus to recruiting is the result of careful attention to these matters. At present the work of a colour-sergeant, during the training, is so incessant that when the parade and pay work are got through little time is left for other essential matters.

The whole working of the company is put on a better footing. An officer is in charge of every section; there is a permanent staff-sergeant to each half company, and a respectable number of men can be put on parade with which the C.O. of the company can really do instructive work.

In the Engineer Militia there are no field officers doing nothing. Every major commands a company, and as he has a captain under him he is perfectly well able to do any work such as canteen, etc., in his spare time. In a four-company battalion, one major can take the instruction of the young officers, one the canteen, etc., another the mess, and the fourth the band; in this way everyone has charge of something besides his company, and the general working of the battalion is much simplified. The effect on the major himself is very good. I know I missed the actual command of men very acutely the years I was a major, and I have besides a very strong theory that the divorce of an officer for long periods from actual command of men, is just as bad when doing regimental duty as we all acknowledge it to be for officers of the staff.

As a further improvement I would propose to add a *dépôt* company to each battalion, as is now in the Engineer Militia, such company to consist of a captain, a subaltern, a proportion of non-commissioned officers, both permanent staff and Militia, and a nominal number of privates.

One of the officers would be the instructor of musketry, the other is available for any duty. The non-commissioned officers on the permanent staff should be a pay-sergeant to pay the company, and all regimentally-employed sergeants. The same applies to the Militia non-commissioned officers, such as the mess-sergeant, band-sergeant, pioneer-sergeant, the post-corporal, and any other employed sergeants of corporals. To this company should be posted the band, perhaps the drums, and all regimentally-employed men. The great advantage of keeping these men separate from the service companies is very apparent.

The advantages of having a spare officer and non-commissioned officer or two are great, and need not be insisted upon.

Every service company should have a company sergeant-major, a company quartermaster-sergeant, and two duty sergeants, while sufficient sergeants would be added to the permanent staff to ensure a quartermaster-sergeant, an orderly-room clerk, a sergeant-instructor of musketry, a sergeant cook, a police sergeant, and a caterer for the sergeants' mess, besides a pay-sergeant for the *dépôt* company.

ADMINISTRATION.

One of the great wants of the Militia has always been sympathetic administration. It appears to be almost impossible for a Regular soldier of any rank to understand the peculiar conditions of a Force raised and trained as the Militia is.

I welcome the fact that a Militia officer of great experience has been placed on the staff of the Director-General of Auxiliary Forces, as that is a step, and a valuable one, in the direction of making communication easier between the governors and the governed; but I deeply regret the abolition of the Militia Advisory Board.

The periodical sitting of the Board, which was composed of many of the high officials at the War Office and of six Militia commanding officers, led to most useful discussion and exchange of opinions, and the trifling saving made by its abolition is no measure of its value. Perhaps as a member of that dissolved Board I may exaggerate its utility; but I know that the Militia appreciated the fact that its wants and difficulties were made known by a body of officers who represented all arms of the Service and all parts of the United Kingdom.

Unfortunate results occur continually from the fact that those who make the Regulations for the Militia are not intimately acquainted with the circumstances under which the Regulations have to be administered. To the best of my belief, no Militia commanding officers were consulted before the new Militia Regulations of 1904 were issued, with the natural result that many of them have proved unworkable, and have had to be amended. In my own case the new Regulations spoilt my recruiting for 1904, with the result that I was under instead of over strength, and prevented my promoting any corporal to sergeant. These are only two instances out of others which have come under my personal observation.

A report has lately been called for as to the effect of the new Regulations. Surely it would be better to consult beforehand the people who are most nearly concerned, and who, after all, must be the best judges of how regulations will work, rather than to make new rules, and then, months afterwards, call for comments on their application, which meantime may have had disastrous effects.

POSITION OF COMMANDING OFFICERS.

I should like to say a few words as to the position of the Militia commanding officer. He is granted his travelling expenses within the county for a few visits to his recruits, but he is still a nonentity in the non-training period, and he still has no responsibility for obtaining or training officers or men. He should have the fullest power over his permanent staff, that is, he should be consulted as to the appointments of adjutant and quartermaster. He should be able to send away from the permanent staff any sergeant or drummer who is inefficient. How can he be held responsible for the efficiency of his unit if unsuitable men are sent and retained on his permanent staff? As a matter of fact, he is not held responsible, and is a mere figure-head, without any real authority or recognised position. He should be the commanding officer not only for 27 days, but for the whole year. He should be given as free a hand as the limitations of his position permit, and he should receive reasonable expenses to enable him to visit his recruits as often as he may think fit. If besides this, the Militia recruits were always under their own officers, and the commanding officer had the selecting of them, he could then fairly be held responsible for the efficiency of his unit. Again, a commanding officer ought to have the power of discharging bad characters. One bad man can do an infinity of harm, and while waiting for an

authority to discharge a ruffian, he can contaminate a battalion. The general officer commanding—with whom the power rests—must act on the commanding officer's information, so why, for a purely imaginary supervision, inflict so much discomfort on all ranks of a regiment, as the retention of a really bad man can cause? A commanding officer can always be pulled up if he discharges too many men, and this power would strengthen his hands immensely, besides saving much expense to the country in courts-martial, escorts, and witnesses, to say nothing of unnecessary correspondence.

ENLISTMENT FOR GENERAL SERVICE IN EMERGENCY.

Finally, I would again express my earnest hope that the Militia may be enlisted for general service in the event of national emergency. It has been brought forward several times in this Institution, many years ago by the late Sir George Walker, then by Lieutenant-Colonel Holden, and in 1897 by myself. In 1896 I asked the opinion of all commanding officers, and an overwhelming number were even then in favour of it.

The advantages to the country are so apparent that it seems waste of time to go through the arguments. The unfairness to the Militia, as matters now are, is equally incontestable.

The fleet is our chief as well as our first line of defence, and as long as it is strong no man will fire a shot in the United Kingdom.

But the fleet has its limits. It cannot carry the war into the enemies' territory, which is the only way in which a war can be finished. The French fleet disappeared off the ocean in 1805; but it was not till 1814 that a land campaign which lasted six years put an end to the war.

How many weeks did it take for a war with 80,000 farmers to necessitate our supplementing the largest Regular Army we ever sent abroad by tens of thousands of Auxiliaries of all descriptions?

A very short time ago, with the exception of Canada, every portion of the Empire was divided by vast distances from any European foe. But in the last few years this has ceased to be the case, and moreover, we have had quite lately lessons in the practicability of moving gigantic armies which we should take home to ourselves.

Should an army invade our distant possessions, it will be no question of a few thousand men struggling painfully through deserts, but of hundreds of thousands fully equipped and provided delivered fresh from the train but short distances from our frontiers.

A numerous army available for foreign service will be required to deal with such a crisis. Where is this army to be found? The Regular Army must always be small, and is even now being largely reduced for economical reasons. The Yeomanry and the Volunteers even, in the most critical period of the late war, could only provide detachments. The Militia can, this very day, supply 100,000 men. It is, even under present conditions, fairly trained and well disciplined, and above all, it is properly *encadré*; it is administered on military lines, and it has a military system. With but small expense it could be increased much in quantity and still more in quality.

If open liability for foreign service in time of need was substituted for the present unsatisfactory and unfair conditions, the Militia would acquire a new status. It would be better appreciated by the public, and it would respond handsomely to the encouragement.

Whether you retain the Militia or abolish it, and found a new force on its ashes—whether you adopt compulsory service or trust to voluntary enlistment—a force trained on similar lines, but liable to foreign service in case of emergency, is the only method by which you can obtain sufficient numbers to enable you to oppose with success the huge Armies of modern States.

The history of the Militia is bound up with the history of the Empire. It has behind it long records of honourable service. No newly raised force can succeed to these traditions, and I hold that it only requires fair encouragement and intelligent administration to be equal to any duty the country may call upon it to perform.

Major-General Sir E. T. H. HUTTON, K.C.M.G., C.B. :—I hardly expected to be the first to be called upon to speak on the present occasion, and I should like to preface my remarks by saying that I, at any rate, as representing the Regular Forces, have the very greatest possible sympathy with the Militia branch of the British Army. My experience is not limited to the United Kingdom, but includes Australia and Canada, whose Militia troops I have commanded both in peace and in war. I was extremely gratified to mark the observations by the noble lord in the final portion of his paper with reference to the organisation of the Militia on an Army basis. It is patent I think to every thinking soldier that his remarks at the end of his lecture are absolutely true and correct. The defence of Great Britain is not a matter of defence but of offence; it has been so in the past, and I believe it assuredly will be so in the future. The Army to which the defence of Great Britain is committed, and therefore of the Empire—for with the fate of the Empire the future of Great Britain is indissolubly bound up—must be one of a far numerically larger and more comprehensive character than I think our rulers in the past have contemplated. In the past the numbers have been restricted to one army corps or even two army corps. It is rather doubtful now as to what the numerical condition of the over-sea forces should be; but it is unquestionable, I think, in the minds of thinking soldiers who have considered the Imperial strategical situation, that we must have the power of placing in the field at least 500,000 men. Where is this Army to come from—this Army, representing the Imperial interests? It may require to be called into being almost at any moment. Where is it to come from? I should like this audience just to reflect what the present position of the Empire is with our Indian frontier exposed to the sudden onslaught of Russia, with 3,500 miles of frontier in Canada, with Australia co-terminous with Germany and Holland. We must not forget our treaty obligations as regards Belgium. A few short months ago we were within a measurable distance of war with Russia. Where is the Army we must unquestionably have in the future to come from if it is not from the ancient, constitutional force of the country—the Militia? These opinions are not only shared by the majority of the thinking public in Great Britain, but by our friends and fellow subjects in Canada and Australia. Both Canada and Australia within the last few years have paid very great attention to the conversion of their Militia, not into a number of fighting fragments more or less fairly trained, but into a homogeneous Army; and I feel sure that the real and true future of the Militia of the United Kingdom also is that it shall be converted into a National Army representing the mother country—this central portion of the British Empire. Of course, there are many in the Regular branch of the British Army who consider the quality of the Militia is not what it might be. In this country it certainly is not

what it should be and what it might be and what it can be. The noble lecturer has told us his views on the matter, and I thoroughly endorse—with the exception of some of the minor details—the remarks he has made as regards the improvement of the status of the Militia. As regards the fighting value of the Militia of the Empire, i.e., of the United Kingdom and of her over-sea colonies, you have only to consider history to know the enormous fighting value of a national fighting force such as the lecturer has described. Take for instance the history of the War of Independence of our American Colonies, at the end of the 18th century. The Americans held their own against the very best troops that Great Britain could put into the field—some of the finest troops at that time in Europe. Canada defended her frontier in turn against the United States in 1812 solely by means of her Militia. The Peninsular Army to a great extent was made up from the Militia, that is to say, the Army in the Peninsula was recruited to a very large extent from the Militia. We all know that a very large percentage of the men who fought at Waterloo were also drawn from the Militia. In 1813, moreover, a Bill was passed to enable the Militia to be used on the Continent of Europe; but to come nearer to the present time, it was my fortunate lot in the recent campaign to begin by commanding a brigade which was composed of eight Militia battalions. I formed the brigade, but I regret to say that the exigencies of the campaign transferred me from the command of the Militia, whom I had hoped to lead in Lord Methuen's Army, to the command of the Imperial and Colonial mounted troops in Lord Roberts's Army. I had in the force thus placed under my command some of the finest Militia regiments furnished by our over-sea colonies for the fighting in South Africa. I allude to the Canadians, the Australians, and the New Zealanders. I know therefore by practical experience what can be done by Militia troops when properly organised and fairly trained; and although in some respects in comparison with the Regular troops they do not always hold their own, they have at the same time distinct advantages and value of their own which must be reckoned as a compensating asset in the scale of military efficiency. I think a very large majority of my colleagues, the general officers in the Regular Army, share the views that I now express. We know and feel that in the near future we have to seriously consider how we are to fight for the very existence of this Empire. We know that the Regular Army which we have at our disposal is insufficient in numbers however excellent in its *personnel*, and what is still more important, it is inexpansive. What we feel we must have is some Army organisation based upon a national military system which will give us a framework that will enable us to expand numerically to the requirements of any campaign in which we may be engaged. This may easily be arrived at, as the lecturer has described, by placing the Militia of the United Kingdom upon an Army basis. It will necessitate only a small addition in numbers, from perhaps 120,000 as it is now, or, plus the Yeomanry, 125,000, to some 250,000, to be organised into brigades not only complete in their fighting units but with their administrative departments as well. A peace establishment should be laid down, together with a war establishment, thus giving us at least half a million of men. Such is the system that has been adopted in Canada, and such is the system which has been adopted within the last two years in Australia. I feel confident that the results in those two great colonies will be to confer an enormous benefit not only to themselves but to the best interests of the Empire. I trust that the admirable views propounded by the Duke of Bedford and by Lord Raglan

in the House of Lords last night may echo through the length and breadth of the United Kingdom, because it is a matter of the most portentous interest to the maintenance and welfare of the British Empire that we should have some military system consistent with modern requirements of war which will enable the British Government to utilise, when a national emergency arises, the admirable and excellent fighting stuff we have in this country. If I speak warmly and with some strength of conviction it is, I assure you, because I have had, both in peace and in war, the practical and not merely the theoretical experience of organising, and of then leading the very description of troops to which the noble lecturer has invited our attention.

Lieut.-Colonel R. M. HOLDEN, 4th Bn. The Cameronians (Scottish Rifles) :—I cannot commence better than by expressing to Lord Raglan, what I am sure we all feel in this room, our indebtedness to him for having brought forward the subject of the Militia in so able a manner to-day, and particularly for having done so at a time like the present, when the Force has been made the subject of much unfair and unjust criticism on the part of people who seem to be unacquainted with its constitution, ignorant of its history and past services, incapable of comprehending its potentialities. We have heard the Militia described by a member of the House of Commons as a fraud. I do not know exactly what a fraud is, but I believe it to be an individual or institution which pretends to be what it is not. In that case, if there is one branch of the Service more than another which is not a fraud it is the Militia. It has never pretended to be what it is not; but it has on many occasions gone out of its way to be what it never pretended to be. Its real province until recently has been the protection of these islands, but it has on several occasions gone out of its way to undertake foreign service and active service abroad, both of which were quite beyond its obligations. The late Commander-in-Chief, whom we all respect and admire, stated in his evidence before the Royal Commission that the Militia was a source of anxiety to him in South Africa. I confess I am not surprised. If you carry your thoughts back to the end of the year 1899, when our highly-trained scientific Army had met with many reverses, you will find that the Regular Army was a source of far greater anxiety to the Queen, to the Ministry, and to the whole nation. In these circumstances it is not surprising if the Commander-in-Chief, knowing, as he must have done, how the efficiency of the Militia had been sacrificed in recent years to its employment as a recruiting agency for the Army, should have felt some doubt as to how it would behave on active service. But I do not think we have any cause to be ashamed of the manner in which the Militia came out of the ordeal. Considering the short amount of training it had, considering that many of its best officers and men had been taken away for the service of the Regular Army, and considering that many regiments went abroad with a large proportion of mere boys of 16 and 17 years of age, I think it is a matter of some satisfaction that the Militia got through the war in so successful a manner. The Militia question is, in my opinion, one of very great importance, forming as it does the basis of our military system. But the time at our disposal for its discussion this afternoon is short. There are many officers in this room who are anxious to speak, and many whom we are anxious to hear, and therefore my remarks must be brief. With regard to commanding officers, it is absolutely essential for the efficiency of the Forces that their position should be reconsidered. In the Militia the commanding officer occupies an

extraordinary position. For one month in the year he is given the command of a regiment composed of men with whose preliminary training he has had nothing whatever to do. For the remaining eleven months in the year he is to all intents and purposes a nonentity, having no more control over his regiment than the colonel who recently brought an action for compensation fancied he had over the Army or the Emperor of the Sahara. A Militia commanding officer ought to be in command all the year round, and made responsible for the efficiency of his unit. The deficiency in the commissioned ranks is a serious matter. I think the Lords Lieutenant of counties still have great social influence over the young men in their counties, and if they were occasionally to exercise that influence in favour of the Militia, I believe we should obtain a great many officers who now hold aloof. Lord Raglan has, however, presented us with a cut-and-dried method for solving the difficulty, which is to make every officer enter the Army through the Militia. I mentioned this proposal yesterday to a general officer in conversation, and he nearly succumbed with astonishment. "What," said he, "is going to happen to Sandhurst?" Well, gentlemen, if Sandhurst did cease to exist, I do not think the Empire need necessarily fall; but there is no reason why Sandhurst should go. Every officer would undergo his recruit training with a Militia unit, and go to Sandhurst, but instead of attending a month's training at Salisbury or Aldershot with his cadets he would do it with his Militia unit. It has been said that in this case the officers would be made birds of passage. Every officer in the Army is a bird of passage until he returns to civil life; it merely depends upon how fast he flies. In the Cavalry and Guards they fly very fast. But admitting that these Militia officers would be birds of passage, they would be very valuable and useful while with us, and when they went to the Army there would be others to take their places. The permanent staff is, I consider, the backbone of the Militia, and we cannot have too many of them or make too much of them. The non-commissioned officers not on the permanent staff always have been and always will be a grave difficulty. For disciplinary purposes they are of very little use, living in constant fear of retaliation on the part of their comrades when the training is over. Better pay might effect an improvement; but I think myself it would be wiser to try and obtain the services of young ex-Army non-commissioned officers, because Militiamen will often obey orders and take advice from them when they will not do so from their own people. With regard to the rank and file, it is very satisfactory to feel that the Government has at last recognised the importance of enlisting the whole Militia for foreign service. It is a most important innovation, which I advocated in this Institution 15 years ago, and I am glad that, although it has taken the Government 15 years to recognise what we simple amateurs saw the wisdom of so long ago, they have at length arrived at the same conclusion. I find it very difficult to gather the intentions of the Government regarding the Militia, and I am not much wiser after reading the statement made in the House of Lords yesterday. I should like myself to see the Militia become the Home Service Army, while retaining its name of Militia. I would require all recruits to undergo six months' continuous drill on enlistment; and I should like to see the control of the Force placed more in the hands of its own officers, and the commanding officer made responsible for the efficiency of his unit. We should then have a Force at whose efficiency no one could cavil. The lecturer has suggested the formation of four-company battalions. That may be possible for the Engineers, but I doubt its suitability to the infantry. An eight-company battalion enables the C.O. to place his half

battalions under the majors and exercise his unit as a brigade. On active service a four-company battalion after any serious number of casualties would become useless as a fighting unit. In peace time the prospects of promotion would be very small, while from the Militia point of view it would entail an enormous expense in the up-keep of the mess and band. We are all, I am sure, very much indebted to the lecturer for having brought this subject of the Militia forward to-day; but I always feel that Royal Commissions and lectures have very little effect on the Government and on the public. We require to educate the public and we require to educate the Government, who never seem to understand the Militia. Nearly every member of the House of Lords, except perhaps the Bishops, is either an active Militia officer, an honorary colonel, or a Lord Lieutenant. The House of Commons is composed of a large number of Militia officers or ex-officers, and when the subject of Army reform is brought forward in either of the Houses of Parliament I would appeal to them to stand up and say a word for the Force to which they belong. I believe it would have far more effect in paving the way for a proper appreciation of the Militia than any number of lectures, even when delivered by so able and distinguished a soldier as Lord Raglan.

Colonel W. C. E. SERJEANT, C.B., 5th Bn. The Rifle Brigade :—One or two distinguished officers present who have been connected with the Militia appear to dissent from Colonel Holden's remarks as to Militiamen under 17 years of age having proceeded to the front during the late South African War, and they were probably justified in so doing. As a matter of fact, officially no man was permitted to proceed to South Africa under 18 years of age in the Militia, and, I believe, in the Regular Army they were not allowed to go out under 20. For the credit of the Militia and for the anxiety it caused the late Commander-in-Chief, Lord Roberts, there is something to be said. In many instances the battalions that went to South Africa, especially towards the end of the war, had given their best men and their best junior officers to swell the ranks of the Regular Army and its departments, with the result that their own ranks were depleted to an enormous extent. Take my own battalion—it is a very old one, raised in the year 1642. We were in January or February, 1901, under 400 strong. We had sent drafts to three different regiments; we had supplied drafts to the Wiltshire Regiment, the Buffs, and the Middlesex, and the Army was heartily welcome to them; but early in 1901, when we were down to about 380 and wanted to go to the war we asked ourselves what was to be done. We required recruits. You all know the system in London! You have to take what is sent to you. Fortunately the general officer commanding at Woolwich, an exceedingly able and broad-minded officer, rendered us every assistance, and the result was that before the end of October, 1901, we were up to establishment, and from March that year we had been sending from 30 to 50 men per month to the Regular Army. I do not think that is a bad record. We had to take out about 500 recruits, dump them right down in the presence of the enemy in De Wet's country, and yet the battalion did right well. But we had to do the work with about 500 recruits who had never fired a trained Militiaman's course. Was that the fault of the Militia or was it the fault of the Treasury authorities? No one can fail to agree with what the noble lord has proposed with regard to increased efficiency. Why is the Militia not efficient? Simply because it has been gradually removed from its old county *locus standi*, its old recruiting conditions, from its mother, so to speak, and severed from its ancient prestige, traditions, and

local influences, until it has become a comparative nonentity, a mere recruiting agency for the Regular Army. The only way we can economically provide sufficient and efficient forces to sustain the prestige of this Empire is by returning the Militia to its original system of county organisation, control, and administration. Our forefathers had more knowledge of the matter than we possess. They were men intimately acquainted with the constitution of their country and with the character and needs of the forces necessary for their military requirements. They handed us down a system which in its simplicity and perfection is infinitely finer than any Continental Militia system, not excluding the Swiss system, of to-day. We have in our old Militia system the means of providing every man necessary for the defence of this country, and even for the defence of the North-West Frontier of India. Mark you, we shall never solve this complex defence problem until the Militia is permitted to revert to its old county *locus standi*. Take the Lords Lieutenant and Deputy Lieutenants of counties. Who removed the power of Militia officers from them? They would gladly exercise their rightful functions to-morrow; but those who removed the power from these Lords Lieutenant and Deputy Lieutenants have rendered the exercise of their functions impossible. The noble lord referred to two Militia units in the course of his lecture: the 3rd D.C.L. Infantry (which I knew as a boy) and to my own regiment, the 5th Bn. Rifle Brigade, removed in 1897 from its own county. The noble lord said that the decline of the 3rd D.C.L. Infantry was owing to the decline in the mining industry; but is that so? I am a Cornishman, and am somewhat interested in Cornish landed property, and I have some knowledge of the conditions obtaining in Cornwall. It is true the mining industry has almost disappeared; but the clay industry has replaced the former. Where one mine has ceased working, three clay works exist to-day, and in these works, in which I am interested, they employ many thousands of men. Under certain conditions, at least 1,500 clay-work employes could be available for the up-keep of the county regiment, which has now dwindled to an irreducible minimum. Those who possess local influence and interests are not encouraged by the authorities to care for the Militia or to interest themselves in the Militia. The reason why our regiments are dying out is because the authorities have long since severed their official links with those local county authorities and residents who alone can influence good recruits to join these Militia regiments. The Militia have been discouraged in every way. The highly efficient original Militia system has been rendered almost unworkable in these days, and there is not a commanding officer of Militia to-day who can turn round and say that he has received proper encouragement from the old War Office authorities. I say, remove the Militia entirely from administration by War Office authority, and let us go back to our old local system. The large landed proprietors' sons and the sons of large employers of labour will then take commissions in the Militia as formerly. They will make up for their want of military knowledge by their superabundant zeal and business ability, and a new spirit of emulation will arise. They are the protectors of the land, the dwellers on the land, and whether your frontier line be simply on the confines of the coast here or in the North-West Provinces of India, you will always have the right men for its defence; only you must encourage the right men, and not the wrong men, to raise your forces locally and to officer them. Let Lords Lieutenant, Deputy Lieutenants, and municipal authorities co-operate with commanding officers in providing recruits. They are prepared to do it at the present moment, but the War Office has removed the Militia from its original sphere of

local influence and control. If original Militia conditions be re-established, your Militia will be restored to its original position, and will not be affected by obstruction from authorities who are powerless to provide for its needs in civil life. The War Office cannot find employment for Militiamen during the non-training period. If you want good men in the Militia you will find that they will not enlist unless they can obtain remunerative employment during the non-training period. Good men can always find employment locally. It is only through the local authorities, who have the means of employing the men in the non-training period, that you can obtain good men. In this way you would create a new interest in the Militia, and the best and keenest Militia soldiers would go on to the Regular Army as in the old times. We should have, as we had then, the eldest sons serving as officers in the Militia and the younger sons serving in the Army, when the elder brother in the Militia would take care that their own county regiment should be supplied with good men to fight under their younger brothers in the Army. What the Militia want is steady employment. If you can go back to the old system and encourage the landed proprietors and big employers of labour to sustain their county regiments you will have the regiments up to establishment, and every man who does well in his regiment will be sure to obtain a good civil berth. We try to carry out this plan in my own regiment. Provided a man does well we make every endeavour to get him a good job in civil life, and notwithstanding all the obstacles that have been placed in our way—I will not say by the present military authorities, but by those in the past—we have continued to exist, and we hope to do so in the future. Militia reform is not a question of party politics, and the Government should speedily institute Militia reforms on the basis of original Militia organisation and local control and administration.

Major-General H. C. BORRETT, C.B.:—I will not detain you long, but I wish to correct a point, which I think I am able to do, because when the South African War broke out I had the honour to be Inspector-General of Auxiliary Forces at the War Office, and also had the honour of sending out the first 30 infantry battalions to the war. The age at which the Regular soldiers went out to fight the Boers was 20, and no Militiaman was sent out by the War Office under the age of 18. Those were the orders given by the War Office. It was the strong wish at the time of the Secretary of State for War that young men under 19 should not be sent out. I had a look through all the returns, and I found that if that order was carried out we should lose a third of the Militia, and it would make the Militia battalions too weak to send out. The Secretary of State for War then agreed to 18 years of age, and as far as I know that order was not altered; at any rate, it was not altered during my time. Early in the year 1900 I gave up the Auxiliary Forces and kept to the recruiting alone; but anyhow, as far as I know, that order was not altered, and no Militiaman was allowed to go out under 18. With regard to what the Militiamen did during the war, I think I am right in saying that the South African War was the first occasion on which a Militia battalion went out to fight an enemy by itself. We all know that at the battle of Waterloo and in the Peninsula there were a great many Militiamen in the ranks, but not as units. I believe the South African War was the first occasion that a Militia battalion ever went out as a unit with its own officers and under its own colonel to fight an enemy.

Lieut.-Colonel HOLDEN :—During the Peninsular War, in 1814, a provisional brigade composed of three provisional battalions went out, every one under Militia officers.

Major-General BORRETT :—With regard to what was said in the House last night, I am exceedingly glad to find that when a Militia battalion is embodied in future the men are to be liable for active service. It was extremely inconvenient during the war to have to ask the regiments to volunteer. It did not seem to me discipline for me to write to a regiment and ask a colonel whether his regiment would go. There were certain regiments which when asked to go did not go, and I do not think that was right. I will not mention what regiments they were. I am very glad indeed to find that in future when a Militia battalion is embodied it is to be available for active service.

Major C. VIPAN, D.S.O. (3rd Buffs) :—There is one small point I should like to mention which has not been touched upon at all, and I think it would perhaps do the Force some good if it were known more generally. Lord Raglan in his opening remarks referred to the services of the Militia in South Africa. There is a wide-spread impression—almost universal, I think—that the services of the Militia in South Africa consisted entirely and solely of guarding lines of communication. That is certainly not the fact. Service on the lines of communication was extremely onerous, and by no means involved sitting still in block-houses whilst the officers were playing bridge and the men were planting flower seeds sent out from England. The service in the block-houses, especially in the Orange River Colony, was extremely severe, and involved a very large amount of fighting. In one instance, in a block-house garrisoned by my own Militia, the whole of the garrison was killed and wounded, with the exception of one man, in the course of an evening's fight.¹ What I wish to bring especially before you is the fact that several Militia battalions were sent into the field, and one of those Militia battalions was twice mentioned in despatches by Lord Roberts for its service in the field. The others, some four or five in number, I believe all acquitted themselves very much to the satisfaction of the generals under whom they fought. There is only one of the numerous works on the war, I believe, that refers to this fact, and that is a book entitled "Our Regiments in South Africa." I believe in several cases when those Militia battalions were mentioned in despatches it was generally supposed, owing to the nomenclature system, that the Regular battalions were being referred to. There is one other point I wish to refer to briefly, and that is Lord Roberts's remark that the Militia were a source of anxiety, because his line of communication was held by partly trained men. As Colonel Holden said, no doubt Lord Roberts was anxious, and so would any other commander have been; but I certainly think that added to that remark might have been some such statement as that his lordship was gratified to find that anxiety was quite unnecessary, because that force managed to hold the lines of communication with the utmost success. No one has ever been able to say a word against that.² Lastly, I should like to read to you a criticism written by

¹ Houtnek, near Brandfort, 3rd August, 1901.—C.V.

² At any rate, after an experience of the work of 30 battalions for 18 months the authorities were only too glad to get 25 more to volunteer and go out.—C.V.

Lord Roberts on the Militia in 1895. When writing to the author of a work which was published about that time, called "The Great War in England in '97," by Mr. William Le Queux, Lord Roberts, in acknowledging a copy of the work, wrote thus of the Militia:—"Thirdly, you take but little account of the Militia, which the Duke of Wellington considered to be our mainstay in the event of a threatened invasion. The Militia seems to be rather out of fashion at present, but it a very useful force, which only needs encouragement and development to turn it into a reliable fighting body capable of reinforcing and co-operating with our small Regular Army." That was the opinion of Lord Roberts about the Militia in 1895. I do not think anybody who knows anything at all about the Militia will say for one moment that, except in one point, which is certainly an important one—the point of the physique of the men—but that the Militia has improved in the most extraordinary manner since the year 1895. Most certainly it has in the education and knowledge of the officers. In 1896 I remember a general who was commanding at that time, I think, the Home District, addressing some Auxiliary Forces—Volunteers, I believe—on the subject of officers going through classes. He said he thought it did not look well for the patriotism of the Auxiliary officers that they would not go to Hythe. That remark showed how little the authorities really knew about the Militia. In the days when that remark was made a Militia officer was *not allowed* to go to Hythe unless it was certified that he was going to be musketry instructor to his battalion. That is an absolute fact. I went to Hythe under those circumstances myself, and every Militia officer who was there was asked after he had joined whether he was going to be battalion instructor.¹

Colonel B. N. NORTH, C.B., Lieut.-Colonel Commandant 3rd Bn. The King's Own (Royal Lancaster Regiment):—I think I may safely say, on behalf of the whole of the Militia, that we only wished all our representatives in the House of Lords and the House of Commons took the same active interest that Lord Raglan takes, and always has taken, in that Force which is always there when it is wanted in an emergency—a Force which receives more abuse than any other Force in the United Kingdom, and yet one to which we are proud to have the honour of belonging. We have been expecting a change, and we have had an official statement and a Bill. If that Bill does nothing else, I hope it will do away with the very strong feeling that exists among many people in Great Britain that some persons in high positions would like to see our grand old Constitutional Force in as bad a state and as inefficient as possible, so as to be able to force conscription on the country. With regard to the permanent staff—the backbone of the Militia—I often think nothing satisfactory will be done in the Militia until the present system is changed, and what I should propose is that every Line battalion should keep a roster: 1, of all officers who wish to become adjutants; 2, of all non-commissioned officers who wish to go on the permanent staff; and the officer commanding the Militia unit should have the right to choose his own adjutant and permanent staff from that roster. Lord Raglan referred to all Militia units being of the same strength. I think it would be

¹ May I say that I cannot agree that the services of the Militia in South Africa were ignored. The services of the first 30 battalions were handsomely recognised. My own battalion, for instance, received a C.B., three D.S.O. and two D.C. medals; the lecturer's remark is certainly correct as regards the battalions which went out later.—C.V.

excellent if that was workable; but I am sorry to say I do not see how it can be worked as long as the present territorial system exists, and the population of the United Kingdom is so very unevenly distributed over its area. The last point I want to refer to is the commanding officer. Personally speaking, I have been always able to have a say in the destinies of my own battalion, but the only reason for that is that I am lucky enough to live close to the depôt, and also lucky enough to be on the most friendly terms with the successive colonels commanding. But I have been there only on sufferance; I have no legal right, and by the Regulations, as they stand, the commanding officer of the Militia is a nonentity, and is meant to be so by the authorities, and until you have that altered I do not think you will ever do much good.

Lieut.-Colonel W. CAMPBELL HYSLOP, Lancashire R.F.A. (Militia) :—As very nearly every point of this very useful lecture has been traversed by other officers present, I will go straight to the one point I desire to make, and that is to tell you of an object lesson which is under your eyes, and with which I fear the Militia Force is not very well acquainted. It is an object lesson extremely suggestive, first because it is new, and in the next place because it seems to me to meet many of the points which have been brought forward as being desirable. I allude to the Lancashire Royal Field Artillery Militia. This corps was established four years ago, and was commanded (and is commanded now) by a Royal Field Artillery officer and three Royal Field Artillery majors. Two of the majors having completed the three years for which they were appointed, their batteries have been taken over by Militia majors. The permanent staff is a very large one, comprising about 40 non-commissioned officers and men per battery, including a sergeant-major, quartermaster-sergeant, and so on. The result is that whereas you have about 25 per cent. of the whole establishment Regulars, 75 per cent. Militia are drafted on to these Regulars for training. That is what it comes to on account of the strength of the permanent staff. So that instead of having a small permanent staff attached to the Militia, you have 75 per cent. of the Militia drafted on to a Regular unit. This, I take it, is not what was intended, but it has had far-reaching results that are well worth recording. In the first place, take the officers. The senior ranks are capable officers who know their work; in the junior ranks there is no difficulty whatever in finding Army candidates. We have had to refuse very many, as we are allowed to take only one per battery. The difficulty comes in connection with the permanent subalterns, because we are out for two months in the year, and that is either too long or too short a time for the average young man. If he is an unselfish man with time at his disposal he will give that time; but if he has a vocation, it is too long to take him away from it. If he has not a vocation and wants one, it is not long enough. Consequently there is a difficulty in obtaining permanent subalterns, yet all the present officers could give their whole time if required. One good result is that the officers are mixing constantly with the Royal Artillery officers, and are kept in close touch with the work going on throughout the Field Artillery. There is no difficulty in getting recruits. We had the usual difficulty in obtaining Militia non-commissioned officers, but the Field Artillery Staff back them up. We have very little difficulty about absentees; they come up well. You will find here an instance in which the Militia is really the complement and part of the Regular Army. With regard to their training, they go on to Salisbury Plain for two months. Although each battery in this last year passed on 50 men per

battery to the Line between the time they commenced recruiting and the time they went out—and consequently we went out with a very large proportion of recruits—they went on to Salisbury Plain and took over 180 horses that were perfectly raw to the work, yet in two months they were driving and competing with the Royal Field Artillery, and I am proud to say that we are not at the bottom of the list. The point I want to make is, that if this condition of things can exist in one corps of Militia, why cannot similar, or even improved, conditions exist in other Militia corps? The commanding officer of Militia calls himself a nonentity in the non-training period. With the Lancashire Field Artillery he is a Regular officer permanently employed. The battery commander (Militia) is paid for his training and for two months besides, and it is his business to keep in contact with his battery and see that everything is going on satisfactorily. If he likes to work there without payment he is quite free to run and instruct his permanent staff. Forty men amount, of course, to a command quite well worth looking after. If this Lancashire Field Artillery is a success—and I believe the military authorities have acknowledged it is a success—why cannot some such system be applied to other Militia? One curious result is that you have here almost exactly the condition of things that exist in the Navy at present: a small nucleus constantly prepared, the necessary complement ready to be added to it, and thus a complete unit fit to take the field. The method is efficient, expansive, and cheap, as barrack accommodation for the permanent staff only is required. I suggest it as a solution of the Militia problem.

Major A. D. SERON, The Forfar and Kincardine R.G.A. (Militia):—I think one of the greatest drawbacks the Militia has is the absolute ignorance of the public concerning it. That is at the bottom of the great bulk of our evils. It does not matter what rank of society you go into, you find 999 people out of 1,000 know absolutely nothing whatever about the Militia. You have only to take up a newspaper to see that nothing is known about it. Whenever there is a joke at a music hall or a theatre about the Services, if the performer makes a fool of himself he is almost invariably represented as in the Militia. That sort of thing tells very much against the Force. One of the things every Militia officer ought to do is his very best to spread the light, and let people know what the Force is and what the services were that it rendered in South Africa and other places. I do not suppose 1 per cent. of the population in this country have the slightest idea that any Militiamen went out to South Africa. They were embarked as the third or fourth or fifth battalions of such and such regiment; nobody was there to see them off, and nobody outside the Service knew anything about it. When mentioned in despatches they were mentioned as the third or fourth or fifth battalion, and again nobody knew that they had any connection with the Militia. The only time I heard of them being mentioned as Militia was when an unfortunate battalion was cut up, and then the posters were covered with the legend: "Unfortunate business with a Militia regiment." That was the only time during the whole war that I saw or heard of the Militia mentioned in the Press as Militia, and I think that is typical of everything. With regard to the provision of officers, I think that would be very largely met if people knew more of the Service; more should be done to enable officers to make themselves competent, especially in the higher ranks. There are no doubt many of the senior officers that are by no means as competent as they ought to be. Some of them in com-

mand obtain extensions when they should not, and remain on, blocking the promotion of the whole regiment, which is very discouraging to the juniors. It is one of the Militia regulations that in considering fitness for command of a regiment consideration will be taken of the number of courses and attachments to Regular and other units that the officer who is a candidate for a command has done during his service. This is practically a dead letter. A great many commanding officers that I know have never done anything; they have got their *p.s.* possibly, but never have been attached to any other regiment or done any course of any sort. If they happen to be big enough men in the county they get a command and there they remain, and anyone else may go out of the Service, but they do not. That is a thing that ought to be seen to. Commanding officers should not be extended indefinitely. They are not of course extended really indefinitely, but they often stay far too long in regiments, blocking promotion. With regard to the courses, I think there ought to be not the slightest difficulty in an officer recovering his out-of-pocket expenses when he attends a course. If you happen to attend a course and it is possible to raise an objection to your being refunded your travelling expenses, that objection invariably is raised. That throws a great obstacle in the way of many people. A man does not see why he should attend a month at a place he does not in the least want to go to and have to pay his railway fare, etc., out of his own pocket. Consequently he does not go unless obliged. With regard to the organisation of double companies, I know nothing about the infantry, but I know a little about the engineers, and being an Artillery Militiaman myself I think that is undoubtedly the organisation that ought to exist in the Militia Artillery. The organisation of artillery units as they are at present, as infantry units, is totally unsuited to the Service in any way. I imagine it is a relic of the old days when nearly all the Militia regiments were infantry, and when they were turned into artillery the organisation of infantry was retained. I hope that point will be pressed home. It would actually save money to the country, because the pay of certain officers would not be required, and there is no doubt the efficiency of the artillery service would be very much improved. As to the non-commissioned officers, what Lord Raglan says is perfectly true. This year during the mobilisation at Portsmouth our inspecting officer there desired me to make a number of enquiries, for his own private information, amongst my men, and amongst the things I asked them was that very question of what happened to non-commissioned officers during the non-training time, and whether the alleged ill-treatment they received at the hands of their men was really a difficulty in the way of men taking the stripe, and I found that it was undoubtedly so. In fact, one non-commissioned officer, a very smart young fellow indeed, said to me: "Well, Sir, my opinion is that the War Office ought to serve out revolvers to the non-commissioned officers when the regiment disbands." I think there is very likely a good deal of truth in that. At any rate, some trifling concession, such as allowing a non-commissioned officer to go at a different time from the men, say, keeping them up a day longer, or something of that sort, would be an improvement. It is when they go away with the men that the trouble begins. With regard to the men's pay, the non-training bounty arrangement may work very well in some districts; but in Forfarshire and Kincardineshire, where my regiment is recruited, the men do not seem to care for it at all. Why, I do not know. I think the men get now too much pay during the training, and this increase of pay is not to their advantage, as it is practically impossible for them

to save it in camp or barracks. It is not "the fashion" for one thing, and so it goes in drink. I do not say they should not have it, but I think the commanding officer ought to have the power to keep back some of his pay in the case of a man who breaks out continually. It hits a man very hard and is very hard on his family to have his bounty severely mulct by the Bounty Board. It would be of advantage to the Service, when a man breaks out and takes to drink, instead of fining him and sending him to the Bounty Court, to be able to say: "If you do not know what to do with your money, I shall only allow you 6d. a day, and you will get the rest of your money when you are dismissed." If the commanding officer could retain the pay in this way it would help things very much, I am convinced.

Lieut.-Colonel the Hon. G. C. TWISLETON-WYKEHAM-FIENNES, Commanding 3rd Royal Scots Fusiliers:—I just want to draw attention to one point that has always struck me with regard to the Militia, which I have never heard given vent to, and that is that the individuality of each battalion, whatever force it belongs to, never seems to be considered at all. I will give just two instances of it from what I have heard in this room to-day. I remember one officer—I forget who he was—said that he would like to have plenty of old soldiers amongst his ranks and as non-commissioned officers because men were ready to obey them. That is my opinion too; but I once discussed the question with a very distinguished commanding officer, and he said he would not have old soldiers in his ranks at all. There is another point I have heard to-day, with which I do not agree, and that came from the lecturer, who praised up Mr. Brodrick for his efforts with regard to the bounty question. From my experience I entirely agree with the last speaker, who has just said that the bounties as they are now are an evil instead of a good. The non-training bounties are not approved of at all; they are considered an evil. Doing away with the re-engagement bounty is what very much distressed us. I took the greatest trouble during two trainings to go about amongst the men and try and find out why it was, and I never discovered they could see any advantage in having an extra amount of money spread over the twelve months and not have the 30s. re-engaging bounty to take away with them at the end of their training. They are not excessively intelligent. Before I sit down I should like to say one word in approbation of what the lecturer said in regard to want of sympathy. It was only this morning at Aldershot I was speaking to the Colonel commanding a distinguished regiment, and I told him I was coming to this lecture. He said: "I wish I could come, because I should like to tell them that where I was stationed this summer they were short of inspecting officers from regimental districts, and so I was sent to inspect a couple of Militia regiments. I had never seen a Militia regiment before, and I was surprised at their excellence." He had never seen a Militia regiment before, and he was surprised at their excellence! Does not that speak for itself? Is not there an exceeding want of sympathy in that, and is not that what we have experienced all along in regard to many battalions? I have written letters about this bounty question to the headquarters of my district, and I have had no answer to them at all. My personal experience with regard to the matter is that there is a total want of sympathy.

Colonel HARRY COOPER, C.M.G. (Late Staff):—The lecturer referred to employing officers at times when the Militia is not out for training.

In 1882, the 1st and 2nd Battalions of the Dublin Fusiliers were abroad. There were not sufficient Regular officers or non-commissioned officer available for duty at the dépôt. Circulars were sent to the officers commanding Militia battalions saying that so many officers and so many non-commissioned officers of their permanent staff would be employed; it was immaterial whether they came for one day, a week, or a month; but so many captains, so many subalterns, so many sergeants, etc., were always to be present. They arranged among themselves how they came, and until some War Office clerk found out extra pay was being drawn by the dépôt, the work was satisfactorily carried on. The result was that the cadres of the Militia battalions of the Royal Dublin Fusiliers had a training and a connection with the Regular Forces which helped them very much in their subsequent work. When the Militia were embodied in the late war (1899-1902) the lecturer said rightly there was no fuss made about it. The garrison at Plymouth was a large one; as the Regulars marched out, the Militia marched in and took over the duties exactly as any Line battalion. The first Militia regiment selected for service out of Great Britain went from Devonport. It went off at a couple of days' notice; nobody was there to see it off, and there was no fuss at all. Later on I was in Africa when the Militia came out. They landed, and either took over duty at the port of disembarkation or went up country in the same way as any other troops. There are two or three commanding officers in the room now I had the honour of meeting in South Africa, and I am very much indebted to them, for not only did they command their own battalions, but they helped to raise the local forces in the Cape Peninsula, in 1901, when there was a question of the invasion of Cape Colony, and the Governor called out the Town Guard. In one month 10,000 men were raised and organised in the Cape Peninsula; this could not have been done but for the assistance of O.C. Militia regiments in Cape Town at the time. Those officers temporarily commanded and trained the battalions of the Town Guard. Later on, after the Militia had been depleted of many of their officers and men, some battalions came out very young indeed, but they all did their work. In 1902 one battalion landed in open boats on the coast of Namaqualand, took over the outposts as they landed, and they were under fire within a month of their leaving England. I do not think you can want any better illustration than that of the value of the services of the Militia, which were never adequately recognised. With regard to the necessity of drill, I do hope that steady drill will not be given up. Steady drill does not go down with the public; but unless you have drill with a body of young men you will not get discipline. The lecturer said it is necessary to reduce some battalions. I hope it will not be necessary. If you have the cadres, i.e., a certain number of officers and non-commissioned officers, wherever there is an English-speaking population in time of stress you will get men, but unless you have officers and non-commissioned officers who know something about their work it is very difficult to get a newly-raised body fit to take the field. Sir Edward Hutton referred to the contingents that he commanded in South Africa. He spoke of them as "Colonial Militia," and I think sufficient stress has not been put on the importance of this. The first Colonial contingents in Africa were mainly recruited from semi-permanent or Militia Forces, and the difference between the first contingents and the majority of those raised locally afterwards was the difference between black and white. I only hope that, whatever is done, England may never give up her Militia. It is the old Constitutional Force of the country. I have left the Service, and am now living in the

country, but I find a strong local feeling everywhere in favour of the Yeomanry and Militia, and if properly looked after they are quite capable of forming a very efficient force.

Colonel F. C. ROMER, C.M.G. (6th Bn. Lancashire Fusiliers):—As one of General MacKinnon's Assistant Directors, I would like to say, on his behalf, how sorry the General was to be unable to come here to-day. I have no brief for General MacKinnon, and for that reason I am not inclined to criticise any of the statements we have heard to-day; but I should like to say one or two things on my own behalf. I think, to begin with, we Militia officers are rather apt to exaggerate small grievances. There is one in particular, to which allusion has been made, that of paying officers' expenses to and from their trainings. That is a matter which has been fully considered at the War Office, and it was found that whereas it is but a small matter for individual officers, it involves a large sum of money when applied to the whole Force. It struck me as being a very large sum of money indeed. I think it must be admitted that there are other things on which we might spend the money more profitably. Another point is that it does not encourage the county arrangement of having all county officers and county battalions. For instance, an officer living in the South of England might say to himself it would suit him to spend his holiday in Scotland, whilst an officer from Scotland might find it would suit him to come to the South of England. I do not say this would necessarily happen, but we might be paying unnecessarily large fares. There is another small matter I would refer to, namely, that of officers' attendance at the School of Musketry at Hythe. I happened to speak to Colonel Monro, the Commandant, a few days ago, and was telling him how difficult it was for Militia officers to find room at the School of Musketry, to which he replied: "That is a curious thing your saying that, because there has not been one class opened for the officers of Auxiliary Forces that has yet been filled. On the contrary, we have always had a lot of vacancies." I fancy that upsets that little grievance. I could make other remarks, but perhaps it would be as well not to make them before this assembly. I will only say that I should like this meeting to know that we cannot have a better friend than General MacKinnon at the War Office. He takes a great interest in the Militia, and is most anxious to do everything he can to meet our views, and I think that when the big Militia question is settled we shall go ahead and carry out some of these smaller reforms as well.

Lieut.-Colonel E. GUNTER, *p.s.c.* (Late E. Lancashire Regiment):—I will not enter into details on what Lord Raglan has put before us; he is much more competent to judge of them than I am. I speak as a Line officer of 33 years' service, and wish to emphasise the fact that the Line officers always appreciate thoroughly the way their brother officers in the Militia work with them, and I do hope whatever changes are made that a territorial and friendly feeling will be kept up as it is at present. I came here chiefly to support Lord Raglan in the motion that the Militia should be liable for foreign service in the case of emergency, but that has been anticipated by the Bill brought into the House of Lords last night. I am sure we all wish it every success, and certainly it will be productive of good to the country. Lord Raglan has not touched on the way to fill up the ranks of the Militia; that, I understand, is a difficulty. I do not feel certain that putting the Militia again under the Lords Lieutenant and holding the County and Borough Councils responsible for this, and even fining them out of the rates, will do it. I believe myself that the only

way to fill the ranks is to pass a law for universal training—every man between 18 or 19 and 25 to train for 12 months. The fascination that this would exert on the youth of Great Britain would be such that after his training he, like *Oliver Twist*, would ask for more. The lads would rush to join the ranks of the Militia in order to gratify their passion for military glory, especially when their liability to foreign service in time of emergency is assured. The officer question—the difficult question of finding officers for the Militia—I feel convinced would be partly solved by that, and many more would enter the Militia than at present. If I might criticise one detail of the lecture, it would be with regard to the lecturer's wish that all officers should enter the Army through the Militia. I cannot myself agree to that. I think we do much better as at present by taking the best of the young gentry of England in different ways: the public school boys through Sandhurst, the Militia officers through the Militia by competitive examination, and the university graduates as at present. I have served with a great many of these officers ever since I was a boy. After the Crimea we had university officers come in, and I think they answered very well. I think the mixture of the three methods answers very well, and I should not wish to see that disturbed. I cordially agree with Lord Raglan that every encouragement should be given. For instance, I agree that two Militia years' service should count as one year's Line service, and that the Long Service Medal should be given. I cannot understand why it has not been given to the Militia; they should have it just as much as the Line. With regard to the difficulties of getting to Hythe, probably that is because there is not room. It is most desirable that Militia officers should be trained, and I think the way they come forward and try and train themselves is most admirable, and they should be encouraged in every way. We must have another School of Musketry. With regard to the organisation of four companies, I cannot quite agree with the proposal, because I think it is most important that whatever the organisation of a Line battalion is, that of the Militia should correspond. They are really part and parcel of the same thing. I believe everybody in the Army now recognises the fact that the Militia is the backbone of the Army, and therefore I should not like to see the individual volunteering into the Line done away with. During the Peninsular War, 100,000 men entered the Line battalions. Just think what strength that gave. The organisation of the Militia is called for in every way, and I hope they will be organised for home defence in permanent brigades.

Colonel HOWARD FAIRLOUGH, C.M.G., 3rd Bn. The Queen's (Royal West Surrey Regiment):—I will only just detain you a few minutes, as I know you all want to be off now; but as a pukka Militiaman, and one who has commanded his regiment nearly 10 years, I should like to say a few words before we break up. I am sure we have all to thank Lord Raglan for a most interesting lecture, and I am also especially pleased to hear—and I am sure we all are—the remarks made by Sir Edward Hutton and Colonel Cooper, two officers who know the Militia well, and whom the Militia well know. I will not dwell upon the points that we all feel as to being snubbed, neglected, and passed over, and having things said about us that are not true, because if I did I should lose myself and possibly lose my temper. But I think I might say a few words with regard to a few matters that we all want. We do not want to be ended; we want to be mended. I think if matters could be left to the Militia and their officers to manage, we should get over a great many of our

difficulties. We should be better able to understand what was wanted, and if that management was allowed we should carry everything out for our true interest. It seems to me that when orders are issued they are issued for the whole Force. What applies to Surrey, where I live, certainly does not always apply to the North of Ireland and Scotland, but it seems to me it has to be carried out. With regard to the four-company battalions, I do not think that would work in the infantry. We do not want more majors; one is quite enough. We want every officer and every non-commissioned officer thoroughly instructed. The permanent staff, as it is, is very good; but I think the commanding officer might have more to say about it. The Militia non-commissioned officer is useless; he is with me, and I believe he is with most regiments; he is not reliable, and with the system that exists it is impossible to make him better. With regard to inspection, we are often inspected by somebody who knows nothing about us. We have already heard to-day that an officer inspected two regiments and was astonished. I wonder he did not fall off his horse. What I say is, let us have officers sent who know something about us. We do not care how long the inspection is, and it would be better that it was unexpected. Let him come and see the battalion on parade or off parade; but let us have an officer who will tell us the truth and tell us our faults, and an officer we can have confidence in. We do not want to be buttered and we do not want to be patronised. As regards drill and discipline, I think it is wonderful what we get out of our men and officers, all things considered. With regard to the instruction that officers receive, it is most difficult, or it has been in the past, to get officers through the School at Hythe, or at any of these places. An officer sends his name in, and month after month it comes back that there is no vacancy. Then suddenly on a Saturday afternoon or night there comes a telegram: "The officer can be taken to-morrow." It happened in my case, but happily I lived close to the depot, and was able to take the South Eastern train next morning and get there somehow. That is not the way to encourage officers. If you want them to make themselves efficient you should give them every opportunity. As regards pay and the out-of-pocket expenses, I do not think they are of great consideration, although none of us are very rich nowadays. That is the sort of thing the War Office can bowl you out over; they very seldom stump up. I say, give us all the advantages you possibly can so that we can train ourselves, and give us pay and allowances while actually under instruction; but if it is a question whether the War Office can afford to pay the officer's travelling expenses from another county or not, I do not think it is a very important matter. As regards the amount of work you can get out of a battalion, I contend that very much rests with the commanding officer. If he has a good system and a good programme, and he works his officers and non-commissioned officers with care and discretion, and makes the most of every hour of the day, there is no lost time in the training, and the result is good. I do not think we have anything to complain about with regard to that. After the training, the commanding officer becomes a nonentity; there is no question about that. If I go into my barracks I am not quite certain what I can do, whether I am exceeding my duty or not. It is a very awkward position, and especially awkward now as a major actually commands the depot and my own permanent staff. I can say that the utmost good feeling exists, but it is an awkward position, and it ought to be altered. I could say a great deal more on many other points on which I am quite certain we all agree, but I will simply end now by

thanking Lord Raglan, not only for his lecture, but for the great interest he has shown in the Force, and thanking those officers who have come here to-day and taken such an interest in us and tried to assist in seeing that justice is done to the old Militia.

Lord RAGLAN, in reply, said :—Before I proceed to reply to individual remarks, I should like to say one word of apology for my lecture. It was written under great difficulties. I was away from my library, and from any place where I could get information, and also I was exceedingly anxious the lecture should not be too long, and therefore I am afraid it is a little bald and not elaborated as I should have liked it to be. But in the case of a Force like the Militia, I think the whole question is one of small details; it is the small details that make up the great whole. It is the particular pea in one's own shoe which one feels, and which one has a great difficulty in explaining to another person. I do not think I need refer to what Sir Edward Hutton said; I know his feeling for the Militia, and he thoroughly expressed his approval of the Militia Force, and the fact that it is a Force raised on Militia lines, which is the only one this country could possibly raise in order to carry out the duties of the Empire. With regard to Colonel Holden's remarks about Sandhurst, Sandhurst is a special pet of the Authorities, and whatever you say against anything else, or whatever you propose to abolish, you must not talk about abolishing Sandhurst. All evidence ever given before any Commission by any officer has been to the effect that there is absolutely nothing to choose between an officer who comes from Sandhurst and an officer who comes through the Militia. If you get an officer who comes through the Militia, he is a far cheaper person, and I do not know why, as a taxpayer, I should be called upon to support an expensive Institution that produces no effect. I think Sandhurst might be a junior Staff College, and that every Militia officer might go through Sandhurst; but, I think you could teach them everything they learn at Sandhurst outside the drill in far shorter time. Three or four months devoted to teaching the elements of military survey, and the elements of fortification, which, after all, is all that an ordinary infantry officer would require, is quite sufficient. Colonel Holden alluded to the four-company battalions, and many other speakers have also alluded to them. A large number of officers who served in the South African war are strongly in favour of double companies, especially the officers of the Brigade of Guards. There is one great danger about double company battalions which my friend Colonel Pollock called my attention to, namely, that it would be seized upon by the Treasury as an excuse to cut down the number of officers. At present, you have two companies with two captains and three subalterns, but you ought to have at least five, and probably six, for a double company. I think there is very little doubt, however, that the Treasury would say to the War Office that so many officers are not required, and when a reduction had to be made, that would be seized upon. As regards the convenience of working, and the general improvement and efficiency of the regiment, I have the highest opinion of the matter. 130 or 140 men on parade gives a useful command that you can really do something with; but with the ordinary average company of 60 or 70 men it is impossible to give really adequate instruction. Another thing is, that in the Militia many of our junior captains are very young, and you would ensure the fact that the company was always commanded by an officer of a certain amount of experience. Colonel Serjeant, and other officers, spoke of Lord Roberts's anxiety; well, I have never been able to under-

stand that anxiety of Lord Roberts. Lord Roberts gave, as an instance for his anxiety, the Irish Yeomanry at Lindley. Why a disaster to the Irish Yeomanry at Lindley should have made Lord Roberts anxious about the Militia is a thing I have never been able to understand, but apparently, it has been accepted by everybody as an actual sequiter. I must say myself that I felt very deeply that remark of Lord Roberts, as I think we all did. The question of the service of the Militia, as Major Vipian said, has been always accepted as merely on the lines of communication. We all know that many battalions, including the battalion in which Major Vipian served, did an enormous amount of marching and fighting, and were continually under fire, and nobody acknowledged it. Most people think that service on the lines of communication in South Africa was like sitting in a signal cabin on the South Eastern Railway, that you had nothing to do except to shout for newspapers to the passing train. We all know that was not the case. The fact remains that the Militia did do an enormous amount of marching and fighting, and certainly had very few rewards and no thanks. Colonel Romer is already so greatly impregnated with the microbes of the War Office that he can say it is entirely the officers' fault that they do not go to Hythe. The officers do not go to Hythe for the reason that Colonel Fairtlough gave, because they are told there is no vacancy. In my regiment, for six years we were never allowed to send an officer to Hythe, and even now the difficulty of getting any officer to any class is enormous. I have never been able to get Regular soldiers to understand that the Militia officer, who receives no money whatever in the non-training period, cannot sit outside his regimental orderly room the whole year round waiting his chance that somebody will ask him, at some time, to go somewhere. That is exactly what the Authorities appear to imagine. Colonel Fairtlough mentioned the instance that happened to himself. An officer in my regiment was going to Chatham on a Monday, and, on the Friday evening before, he got a telegram saying there was no room. Well, first of all it was not true. At Chatham nearly all the officers attending classes are given lodging allowances, as there is no room in barracks. Secondly, at 60 hours' notice the whole of the officer's arrangements for two months were knocked on the head, which was particularly inconvenient as he was married. Every commanding officer has alluded to the question of our visiting our recruits. Personally, I am in a good position, as I have my own *depôt*, and thank Heaven there is nobody else there! But I have a heart which feels for others, and that is why I laid particular stress on the indefensible position in which the commanding officer is put by the present arrangements. A Militia commanding officer has now to go, hat in hand, and ask a major in the Regular Army whether he may go and look at his own recruits. That seems to me an absolutely indefensible thing, and puts the Militia commanding officer in a position which is exceedingly hard on him, and which must be bad for the service to which he belongs. Major Hyslop gave us some very interesting details with regard to the Lancashire Field Artillery Corps, in which I take great interest, because it was formed during the time I was at the War Office. I have not been able to see it, but I have heard it highly spoken of by those who have seen it, both Regular soldiers and others. We have field companies in the Engineer Militia, and they make a wonderful show, considering that we have only the horses for three weeks, that they are absolutely raw when they arrive, and that necessarily our drivers are not experienced, because all they can do is a short course at Aldershot, although the Royal Engineers train them exceedingly well. Still, it is possible to do an amazing amount

with a mounted Force raised on Militia lines, as everybody will know who has seen our field companies, or still more, the Field Artillery to which Major Hyslop belongs. Major Seton gave us a very interesting speech. He supports the organisation of double companies, naturally, because of the extraordinary folly of maintaining infantry organisation for Garrison Artillery. That has always seemed to me one of the most remarkable things in the Militia Service. He said, and my old friend Colonel Fiennes also said, that the men do not care about non-training bounties. It is difficult to say what the men do or do not care about, but the chief advantage of non-training bounties is, that they keep you in touch with your men during the non-training period. You have a hold over them which no other system gives. I think Colonel Fiennes will find that under comparatively new regulations, you can advance the October bounty to men who re-engage.

Colonel FIENNES :—I asked to be allowed to advance the re-engaging bounty, but I got no answer as far as the War Office was concerned. I advanced them out of my own pocket.

Lord RAGLAN :—Perhaps there is a superior quartermaster-sergeant at the Edinburgh Office, as at other places. It has been impossible to get any letters through Devonport either way for the last 18 years. A distinguished officer told me the other day, when I mentioned it, that there was some very superior clerk there. He said there was a wonderful man, a quartermaster-sergeant, or something, who had been there for years, and who, no doubt, sits on everything for three months. Many commanding officers spoke of the individuality of battalions. We cannot legislate in the same way for a battalion raised in Cork as for a battalion raised in Kent, or for an Infantry battalion as for Artillery. That is one of the reasons why I did deeply regret the abolition of the Militia Advisory Board, because all arms of the Service from all parts of the United Kingdom were represented on that Board, and we had a chance to ventilate our grievances, and knew that whatever happened, those grievances did go to the highest authority; whereas, I am afraid nowadays anything we say or write may never get to the people we want to reach. Colonel Cooper gave us a most interesting account of the Militia as he saw it embarking at home and disembarking in South Africa and proceeding to the front, and remarked on the fact that nobody noticed it. An old friend of mine used to say that he should never marry because he would not like to be a bridegroom as nobody minded him at all. The bride was dressed in beautiful clothes, and everybody kissed her and hugged her, and she had a real good time; but the bridegroom was never dressed in beautiful clothes, and nobody ever kissed him, or hugged him, or congratulated him. The same may be said about the Militia. Nobody hugged it, or kissed it, nobody presented it with the Freedom of the City, or gave it dinners before it went away, and suppers when it came back; but it did its duty, and I suppose must be content with that. In conclusion, I have to congratulate myself upon the fact that you all approve of the most important points of my lecture, and especially that we are all agreed as to the advisability of enlisting the Militia for general service in an emergency.

The CHAIRMAN (General Sir Richard Harrison, G.C.B., C.M.G., Colonel Commandant Royal Engineers) :—It devolves upon me now to wind up the discussion. I propose to do so in a very few words, because time is passing rapidly away, and you have heard a good deal that is very

interesting. What I wish to say in regard to the discussion is, that when I came here I certainly was prepared for more opposition than there has been to what we may call the Militia feeling. Whether that opposition has not taken place because of a debate that is now going on in another place, or whether it is because officers of the Regular Army and others interested in this question do not wish to deal with a question that is more or less under consideration by the authorities, I do not know. Certainly, we have had a considerable amount of unanimity in this room this afternoon, but we must not forget the fact that there are two schools of opinion in this matter. There are certain people who think that the Militia and the Volunteers ought to be swept away altogether, and some other organisation, I will not say what, put in its place; and there is another school of thought, which has been represented principally here this afternoon, and to which Lord Raglan belongs, and I think I may say myself also, that we have in the Militia, and also in the Volunteers, which we are not dealing with now, a means of creating a national Army in this country, which will satisfy the whole requirements of the Empire of Great Britain. I do not think the great difference between the Regular soldier and the Militia is generally appreciated; the Regular soldier means a Standing Army, and a Standing Army means "barracks" with all its paraphernalia, the married quarters, the schools, the laundries, the recreation rooms, hospitals, prisons, etc. It means a great deal of expense, and evils that we need not go into. This country, for many years, objected to Standing Armies, because of the evils that they knew existed in connection with barracks. Now the Militia system gives you the least amount of barrack life. The Militiaman lives at his home, and is doing work that is useful for the country, and when he comes out he does so only for a certain period every year for training, and the only way in which he is connected with barracks is that the permanent staff has to be housed, and also those recruits that have to be trained during the winter. So that you have in the Militia system the least amount of evil in connection with barracks. Again you have, in the case of a Standing Army, an unproductive Force, because the young man who is serving in a Standing Army is not doing any productive work, unless it may be indirectly in supporting the police, or in creating schools for unoccupied young men, while a Militia system takes away the least quantity of the productive force of a country. A Militiaman is only out at certain periods of the year, and if these periods are properly thought out, as some of you mentioned to-day—it wants careful consideration for every individual regiment and every battery of Artillery—if, I say, the seasons for training are carefully thought out, the Militiaman is enabled to do his work, whatever it may be, whether in the mine or in a manufactory, or in the field. In fact, he is able to do productive work for the country, and thus a Militia system is taking away the least amount of labour that could be possibly taken under any system whatever. Of course, the Volunteer system is the same thing, only there is less time for training; Volunteers carry out their employment except for a few days during holidays and in the evenings. Having made these few remarks, I will not occupy your time any more, except to say that the Bill that is now coming before the House of Lords, which Lord Raglan mentioned, has somewhat cut away the ground from under our feet in regard to this lecture; but I am convinced that Lord Raglan, in bringing the question forward and in agitating it as he has for a good many years, and you gentlemen who have also taken up the question, have done a good deed for your country, for I am convinced that if this Bill passes, as I hope it

will, it will be the commencement of establishing what everyone on every side I think in England wants, a national Army which will be sufficient for the needs of our great Empire. I have to conclude by thanking you for the kind way in which you have listened to the lecturer and the speeches this afternoon. I must ask you to accord, which I am sure you will, a unanimous vote of thanks to Lord Raglan for coming here to lecture, and also to those gentlemen who have taken part in the discussion.¹

¹In the remarks I made, I was not dealing with the Army for foreign service, which must, of course, be a standing one.—R.H.

THE POSSIBILITY OF OUR FLEETS AND HARBOURS BEING SURPRISED.

*By Commander the Right Hon. the Lord ELLENBOROUGH, K.N.
(Retired).*

Tuesday, 9th May, 1905.

Admiral Sir R. H. HARRIS, K.C.B., K.C.M.G. (President Royal
Naval College, Greenwich), in the Chair.

I AM very grateful to the Council of this Institution for the honour they have done me in asking me to read a paper on the subject of the possibility of our harbours and fleets being surprised during the last few hours of peace, or the first few days of a war, and for the opportunity that has thus been given to me to express my views and to reply to criticisms that may be uttered by those who do not agree with me—an advantage which the rules of debate in the House of Lords did not give me.

In my speech in that House I touched on a great many points, some of which, being rather technical, were not reported in any newspaper. I hope, therefore, that those present will forgive me repeating what I said on that occasion, even if they have already read such portions of my speech as appeared in the daily Press. I do this because I am never likely to find myself at any future time before an audience containing more competent critics than those I am now facing, and I am very desirous of having this subject adequately discussed.

On the 3rd March I asked Lord Selborne if he and his naval colleagues were of opinion that the present laws of the country were such as to enable them to check, if they wished it, the dissemination of news, and to take all other precautions, not only against attacks that might be made on our men-of-war or on our harbours for the purpose of closing them, but against invasion; and if not, whether he would consider the desirability of bringing the subject before the Committee for Imperial Defence, with the view of appointing a committee of specialists, partly composed of naval and military officers, to consider what alterations should be made in our laws for the purpose of securing our own coasts and harbours against surprise, before the commencement of hostilities and during the earlier days of a war, such committee to have power to hear evidence both with closed doors and in public, and to report confidentially as well as publicly.

I went on to say that if what is now called the Blue Water School have their own way, and if in consequence of this we only keep up a small Army, we shall be running a far greater risk of an invasion during the last few hours of peace or during the first

few days of a war, than when the war is in full swing, when our scouts and cruisers may be expected to be in their proper stations, backed by battle-ships held in reserve in positions unknown to the enemy.

I took the opportunity of congratulating the noble Earl and his naval colleagues on the improvements that have recently been made in the stationing of our fleets, and in the constitution of the Reserve Squadron, which will now be more rapidly available in case of emergency. These changes will have the effect of lessening the dangers to which I am about to refer.

The failure of Admiral Togo's attempts to bottle up the Russian fleet in Port Arthur with sunken merchant-ships, and of the American attempts to close the harbour of Santiago, has shown that it is by no means easy to block the entrance of a fortified harbour by sinking vessels in certain selected spots while under a storm of shot and shell, and that it would be much easier to perform this operation in time of peace.

Portland and Portsmouth are particularly exposed to this form of attack. Anywhere between the Point and Southsea Castle the sinking of a single ship would block the entrance to Portsmouth Harbour so that no large vessel would be able to enter or leave that port. Of course, such an obstruction could be removed in time, but a great many important events might happen in the interval. For instance, the enemy's ships might obtain the command of the sea.

There are other methods by which an unexpected attack may be made and which would be attended with but little danger to the assailants in time of peace. For instance, vessels with the appearance of merchantmen might very well enter such estuaries as the River Thames, steam up as far as Tilbury, turn round again, and strew mechanical mines on their way down. The Solent might be blocked in a similar manner from the Needles to the Nab. A vessel might enter Portland Roads, look as if she wanted a pilot, throw mines overboard, and steam out again.

The French papers say that their submersible vessels can remain under water for 12 hours without causing discomfort to their crews. This means that during the winter months they can remain beneath the surface all day, and only come up to breathe at night. The North Sea is probably quite broad enough to protect us against their incursions, but the Channel certainly is not.

The question also arises as to how far submarines may be allowed to make use of neutral bases, such as Ostend or Flushing, and what methods could be adopted to prevent them from creeping about in neutral waters among Dutch and Belgian islands within a three-mile limit. Some modifications in International Law will probably have to be made.

Port Arthur experience also shows that ships at anchor at roadsteads such as Spithead or Plymouth Sound, would be very liable to be attacked by torpedoes. The 18-inch torpedo now coming into general use is a far more effective weapon than the 14-inch torpedo used at Port Arthur on the 8th February. The 18 inch torpedo has a greater range, and would, I think, probably sink any battle-ship it might strike, instead of merely disabling her for a time.

We are, I think, in far greater danger when all our fleets are assembled at Spithead for a naval review than on any other occasion.

The positions of all our ships are shown on charts that can be bought for a few pence. A night attack made by 50 or more torpedo-boats might sink all our available battle-ships and destroy our naval supremacy at a single blow. At the very time at which we feel most inclined to be vainglorious and to boast of our strength, our very existence is dependent on the forbearance and good faith of our neighbours. The celebrated attack on the Russian fleet at Port Arthur was made by 12 torpedo-vessels, and the Russians have not yet got over the results of it. It is, I think, a great mistake for us to shut our eyes as to the possibility of such an onslaught and to its consequences.

Whether we are at war or whether we are at peace, all the forts that protect our naval anchorages should be constantly kept on a war footing, as ready to open fire as if they were ships in commission. Precautions that were not required ten or twenty years ago, have become indispensable now that new weapons and new methods of warfare have been invented. When war does come, it will probably give as little notice as an earthquake.

I do not, however, wish it to be understood that I think it necessary to keep all our sea coast forts bristling with 12-inch guns. They are very expensive and take a long time to build. After the war had lasted a fortnight the fear of anchored mines would probably deter an enemy from directly attacking any of our naval bases with battle-ships. An intermediate type of gun, such as the 7.5-inch or 6-inch would have power enough to pierce unarmoured vessels, and if mounted in sufficient numbers would prevent him not only from removing or destroying our mines or laying down explosives of his own, but from reaching any narrow channel which he might wish to block by self-destruction. It would be absurd to wear out the bore of a 12-inch gun in doing work that could be done by a lighter weapon.

The fittings and gun mountings of the heavier guns on shore, should be of exactly the same pattern as those used on board ship, so as to be interchangeable. Spare guns should not be kept in store, but should be mounted in sea coast forts ready for immediate action before hostilities commenced, ready to replace the worn-out or damaged guns of battle-ships as the war progressed, or to be sent abroad for use in a siege. If when the war began the Japanese had not had 11-inch guns in their sea coast forts, Port Arthur would have held out much longer.

I may say here, however, that I think that when the war has lasted a fortnight, if no great naval disaster has happened to us by that time, that our existing fleet, thanks in a great measure to Lord Selborne, will be found strong enough to deal with almost any hostile combination. We may have to endure much suffering and heavy losses, but I feel assured that we should eventually get the best of it.

If a naval surprise of the description I have referred to was successful, and our battle-ships were blocked up or destroyed, we might expect to have to meet an invasion. Many of our countrymen form their opinions of the number of ships, and of the quantity of tonnage required to transport an army from the amount made use of when we had to send troops to the Cape. This I look upon as quite a mistaken estimate. On a long voyage, overcrowding would injure the health of the troops, but on a short trip there is scarcely

any limit to the amount of overcrowding that infantry can undergo without impairing their efficiency. Besides, the same steamers could cross the Channel several times in a day, using the fire-hose to clean the ship on the return voyage.

During the South African war, some ships such as the "Bavarian," carried close on 2,000 men. Such vessels could easily carry 5,000 men or even more across the North Sea or Channel. See what numbers are carried in fine weather by excursion steamers.

It has been said that in case of an invasion that the enemy would be able to bring very few horses, and that he would therefore have to fight at a disadvantage with his infantry unsupported. I think that he would bring his guns, and that at first he would endeavour to occupy a large extent of country, so as to be able to seize horses, carts, and saddlery, mount his staff officers, and scouts, and relieve his men from the toil of moving their guns with drag-ropes.

The mobility of such artillery, would, of course, be very much less than that of ordinary field batteries, but the guns could be moved by captured horses quite as fast as our heavy artillery was moved during the South African war. In these days of long range, it is not necessary to change the position of guns in action as often as it used to be in the days of short range.

It is also a fallacy to suppose, that it would be necessary to assemble a large army in any one place, before embarking it. Continental nations keep large garrisons in many of their sea-port towns. Troops mobilised for autumn manœuvres in the vicinity of a large harbour would attract but little notice in this country.

Detachments could leave different ports and arrange to meet on our own coasts so as to act together. If they chose they could land in different places and meet and support one another afterwards.

In the olden days it was almost impossible for sailing vessels to work in concert, when out of sight of one another. But at present, full-powered steamers, with the help of telegrams, Marconigrams, and other modern inventions, can assemble, make a sort of Clapham Junction at any previously selected place, and time their arrival to a minute. All ships now carry chronometers, whose error on Greenwich mean time is known to a few seconds.

Of course fogs and bad weather may interfere with their meeting, but after all fogs and bad weather are the exception and not the rule. It is unsafe to rely on them alone, when in presence of an adversary who is prepared to run risks.

Our torpedo-vessels and submarines would undoubtedly do their best, but their unsupported efforts might not be very successful.

Troop-ships full of men are not quite unarmed in presence of a destroyer. Splashes from the stream of lead that they could pour out from the men's rifles would be very likely to enter the conning tower and the sighting holes in the shield, interfere with the aim, and disable the officers in charge. In fine weather, they could make use of any artillery or pom-poms that might happen to be on board. Under the electric light, night becomes as day. I think that I am correct in saying that during the present war, with the exception perhaps of the "Asahi," which has since been repaired, no ship under full steam has yet been struck by a Whitehead torpedo. 22 or 24 destroyers appear to have been at Port Arthur. They have all been accounted for. But not one of them ever succeeded in breaking

through the screen of fighting-ships that formed the escort of the Japanese transports.

The theory that a fleet of escorted transports would certainly be scattered or sunk by a squadron of unsupported destroyers, that was in vogue before this war began, would appear to require some modification.

In 1866, the King of Hanover received an ultimatum, giving him 24 hours' notice in which to answer. When he inquired where his troops were, and where those of Prussia might happen to be, he found that Prussian officers had asked and obtained permission to send troops through his territory from Schleswig-Holstein to Minden. By the simple process of stopping on the road, the Prussians had seized the town of Harburg and several other important positions in the very heart of his dominions. There was nothing to be done but to endeavour to march the Hanoverian Army out of the country as quickly as possible. After a most gallant fight the Hanoverians were forced to capitulate. The kingdom of Hanover came to an end.

A similar catastrophe may await us if we do not take sufficient precautions. Steamers full of concealed troops might take up berths one after another in some of our harbours and commence to disembark at a predetermined time in different places.

If simultaneous attempts to sink our battle-ships and to block our harbours were successful, the enemy might then be able to protect his transports from torpedo attacks, and so reinforce the invading army.

A lost battle between London and the sea-coast would inflict untold misfortunes on the inhabitants of these islands, both in their public and private capacity.

Such an event must never take place. If we keep up our present armaments, I do not think that it ever can take place, unless our Navy is surprised at the commencement of a war.

If defeated, we should have to accept a dictated peace, the terms of which would probably include the transfer or destruction of the rest of our fleet, the payment of hundreds of millions of money, and the surrender of the greater part of our possessions beyond the seas. Once the *ægis* of our protection was withdrawn, the conquest of such dependencies or colonies, that the enemy might happen to want, could be undertaken by him at his leisure. Our adversary might even insist on retaining a portion of the county of Kent or of Yorkshire. Such an idea may appear to be preposterous to some people, but it is not more preposterous than the annexation of Alsace-Lorraine by Germans would have appeared to Frenchmen before 1870.

Now I am sanguine enough to believe that an attempt at invasion would probably fail. Still, I do not think that the odds against it are 30 to 1. Supposing that it did fail, and that the enemy lost 100,000 men, that is less than one-thirtieth of what France or Germany claim to be able to put in the field. Such a loss would have but little effect on the result of the war, while if the enemy succeeded it would be *death* to us as a nation. The stakes would not be equal. We should be in the position of the Athenians after the battle of Aigos-Potamos.

It is said that even Homer sometimes nodded, but our Admiralty must never be caught nodding. I believe that it is pretty wide-awake, but the Admiralty routine should be such as to ensure that it should never be taken unawares.

Considering that a lieutenant or a sub-lieutenant is always on duty when a flag-ship is in company with the squadron that her admiral commands, and that the Admiralty at Whitehall is a sort of glorified flag-ship, the supreme flag-ship of a fleet of flag-ships, I do not think it is too much to expect that a post-captain should always be on duty at the Admiralty, both night and day, whether in war or peace. I do not mean to say that he should always be walking the quarter-deck, but that some one of that rank or above it, authorised to act in the name of the Admiralty, in cases of emergency only, should always be on the premises, ready to ring what I may call the Admiralty fire-bell.

Proper living and sleeping accommodation should be found for such officers, just as is done at the Foreign Office for those clerks whose business it is to attend to despatches in cypher that may arrive at night.

I look upon the habit of taking an occasional week-end holiday as a very good one, for I think that change of air and scene enables many men, especially those who are advancing in years, to retain their health and capacity for work for a longer period than would otherwise be the case. Therefore, I do not wish to interfere with the week-ends of the Naval Lords of the Admiralty.

I think that the Intelligence Department, with the addition of some officers specially appointed, should undertake this work, and that space should be found to lodge them at the Admiralty. I also think that if possible, the two Senior Naval Lords should have house-room at the Admiralty, not for their own convenience, but for the convenience of the Service.

Unfortunately, however, the week-end absence of nearly all the officials who are connected not only with public departments but with all large private enterprises, gives a grand opportunity to an enemy who might commence his operations late on Saturday night, or early on Sunday morning, more especially if that particular Sunday was succeeded by a Bank Holiday.

Some of the railway telegraphs, those for instance that are in use with the object of facilitating traffic, would still be open, and if they are kept in connection with our Government offices, dockyards, principal harbours, camps, garrison towns, and also with such anchorages at which our men-of-war may be temporarily lying, we should have a much better chance of being forewarned and prepared. I have heard that some such arrangement has lately been made with the railway companies. If so, I think that it ought to be generally known.

If a possible enemy, while meditating on the chances of war, felt quite certain that any attempt to obtain some initial successes by surprise would result in failure, it would remove a temptation to commence hostilities, and make for peace. Therefore, I think it desirable that the world in general should be acquainted with some of our precautions against surprise. But many of our preparations to resist sudden attack should, of course, remain State secrets.

Some military men are desirous of handing over the garrisoning of our naval fortresses to the Admiralty. The Navy is, I understand, taking over the mining operations. It might also be of assistance in the lookout and signalling departments, but with those exceptions, I am strongly opposed to any further change. The sailors would be wanted at sea. In the meantime, however, I think that the Navy

has a right to expect, that the Army will always look upon the forts that surround our naval bases as frontier fortresses, ready to open fire on a possible enemy at a very short notice. A 20th century sea-coast fort should always be as ready for action as a man-of-war at sea. The last person likely to be deceived by a sham or empty fort is an enemy who has had the opportunity of studying it in time of peace.

Whenever a foreign squadron enters any of our harbours, it would appear discourteous to make special preparations by manning and arming forts. There should be no need of preparation. The forts should always be ready.

The Admiralty and the War Office have power to make regulations dealing with most of the points to which I have alluded. But there are, I think, many precautions that ought to be taken, that are beyond their powers, and which would require special legislation. Last year the progress of science rendered it necessary to pass laws relating to wireless telegraphy. If similar special legislation concerning the publication of news is required, it is better that it should be carefully considered in time of peace, lie dormant until wanted, but ready to be brought into operation without a moment's delay whenever war might appear to be imminent. The Admiralty is, I think, the proper department to have these powers, because it would probably take longer to issue a Royal Proclamation or an Order in Council than an Admiralty notice.

When a crisis arises, Parliament may not be sitting, and even if it is, we all know that laws cannot be passed with the same rapidity that was possible a few years ago. Besides, hurried legislation is generally bad legislation. The law might not be altered until it was too late. In other words, it would be a case of locking the door after the horse was stolen.

There ought also to be some local regulations for guarding our harbours against surprise. If the existence of such regulations were known to pilots and to seamen frequenting the port, less annoyance would be caused when such precautions were necessary. By annoyance, I mean that our own ships would be less likely to be fired at by our guns. These regulations should have the force of law, when called into existence by the Admiralty.

No pilots except those who are British-born should ever be allowed to exercise their profession on our coasts. I do not think that even naturalised British subjects should be permitted to act as pilots. Such naturalisation would often be only skin-deep. We should rely on the real, and not on the electro-plated article.

The doctrine of "Mare Clausum" will have to be partially revived in our next naval war. The Japanese have, I believe, already done so to a certain extent by cautioning ships to keep clear of the Pescadores. To protect us against invasion, and to save our battle-ships from destruction, the three-mile limit must be extended to the enemy's shores. It would be scarcely possible for our admirals to protect the country properly if they are not allowed a free hand, both in the North Sea and Channel. We ought also to be able to deal in a summary manner with neutral yachts and merchant-ships, that might act as scouts, on a real or pretended voyage.

During this war, the Japanese have been wonderfully successful in concealing the positions of their battle-ships and larger vessels. Whenever the Russians made a sortie from Port Arthur, the Japanese

battle-ships always turned up from somewhere, before the Russians had got very far. We do not yet know for certain what ships were engaged in the various actions. The Japanese Press laws must be worth studying; while not permitting the publication of certain war news, they appear to allow considerable freedom of criticism.

Should we be equally successful in keeping secret the whereabouts of our ships under our present laws?

When the Dogger Bank incident took place, we played our cards face up, exposed to the view of a possible enemy. It was perhaps well in that case that the Russians should know that we were ready to strike. But if we had wished to act otherwise, if we had wished to play our cards unseen, that is, if we had wished to move our ships without its being known, could we have done so in the present state of the law? I doubt it very much.

I have not got a cut and dried bill of my own, dealing with all the problems to which I have alluded, for I do not consider that any one man in Great Britain is capable of drafting such a document in a satisfactory manner. Such a bill, I think, would require to be drawn up with the assistance of two naval officers well acquainted with the details of the Russo-Japanese war, and with our own manœuvres, in conjunction with two military officers of similar standing and experience. They would require the aid of a lawyer of repute and ability, and of a Parliamentary draftsman before a bill could be produced, which would be likely to be of practical use.

Such a committee before reporting would have to examine harbour-masters and other persons with local knowledge, such as managers of docks, railways and telegraphs. It would also have to call before it gentlemen of the Press, as cases might occur when it might be necessary to check dissemination of news, and this would have to be done in such a manner as to give the minimum of annoyance. As it would be most undesirable to give any possible enemy information which might disclose the weak points in our armour, the committee should have power to hear evidence, not only in public but also with closed doors, and to send in a confidential as well as a public report if it thought proper to do so.

I have seen some complaints in the German Press about the changes in the stationing of our fleets. The writers of these articles take quite a wrong point of view. The alterations in the stationing of our ships are a compliment to the efficiency of the German Navy, and ought to have the effect of augmenting the respect that the two nations feel for one another. Had we, on the contrary, taken no notice of the increase in magnitude and efficiency of the German Fleet, I could well have understood that some German naval officers would have felt hurt at our self-satisfied complacency.

I am also glad to see that the manœuvres for 1905 and 1906 were to take the practical form of exercising our fleets in the oceanic strategy of passing from peace to war. I regret that it has been necessary to postpone them. I am now asking that equal attention should be paid to the tactics of passing from peace to war on our own coasts and in our own harbours.

There is unfortunately, a belief in this country that some premonitory growls will always give us time to prepare for the tiger-spring of war. We may feel the claws and teeth first. The growls will come afterwards.

In reply, Lord Selborne said that he was not fully prepared for the great extent of field over which I had travelled, and that he did not propose to discuss several of the questions that I had raised. He considered that I had greatly underrated the difficulties which would face an invader, and that anyone who had followed the Russo-Japanese war in its naval aspect must have seen the paralysing nervousness that haunted the Japanese so long as there was a Russian fleet in being, and they had troops they wanted to support. He also said that the Japanese never took any serious risk in the matter at all.

Now on that point I differ from Lord Selborne. The Japanese certainly interposed a screen of men-of-war between their transports and Port Arthur, but they took the chance of that screen being pierced or destroyed in an unsuccessful battle. On the 6th February, 1904, they embarked some thousands of troops, before a shot had been fired and before they had damaged the paintwork of a single Russian ship.

Lord Selborne also said that during the critical period of suspense before war, Governments will be most anxious to take no step that would precipitate a war that might be avoided. It is for that very reason that I ask for more preparation for immediate danger in time of profound peace, and for constant watchfulness and complete garrisoning of our sea coast forts. The other precautions to which I have referred should also become matters of permanent routine. Such preparations, if made in a time of crisis, might have the effect of bringing on a war. It is best to be always ready.

In referring to the question of dissemination of news, Lord Selborne said:—"I know I am confronted with a problem of the greatest difficulty, and a matter of the most serious import. I entirely agree with the noble lord that it is a question which, as much as any that I know of, must command the study of the Committee of National Defence; but I would go much further than that: it is a question not only for the Committee of Imperial Defence or for the Government of the day, it is a question for the Opposition of the day, for the whole of Parliament, and for the whole of the Press also. This is not a question which, in my opinion, can be settled by any Government on its own responsibility, or by Parliament acting as a Parliament and distinct from any party lines; it is a matter on which Parliament must invoke the patriotic co-operation and collaboration of the Press. And it is from that point of view that I ask both Parliament and the Press to begin to study this question, and to think of the solution to which we ought to look forward, because I am not exaggerating when I say that the patriotic journalist, without a thought that he was doing his country any harm, might in the day or two which precede war publish news which might mar the whole issue of the naval campaign of this country. That is the position of the law as it at present stands. It is a position with which no body of public men of this country, whether politicians or journalists, can be content; and I thank the noble lord for having given me an opportunity of trying to impress upon my fellow-countrymen the importance of a question which has hitherto been too much neglected in this country. Again I would point to the experience of the Japanese war. I believe—I am not in the confidence of the Japanese Admiralty—that if you were to ask them with regard to the command of the sea which they have obtained, and on which

the whole issue of the war for them must eventually depend, they would say that what they have done could not have been done unless they had full powers to prevent the dissemination of news affecting the movements and the positions of their ships. And it is with that object-lesson before my fellow-countrymen that I ask them to study this question." (Lord Selborne's speech is quoted verbatim from the *Times* report.)

Two days before making this speech Lord Selborne was present at a meeting of the Committee for Imperial Defence, which lasted two hours. As notice of my question had been given several days previously, I think that I may fairly infer that Lord Selborne was on this occasion proclaiming not only his own views but those of his colleagues, both on the Committee and at the Admiralty.

Now, the loyalty and good sense of 99 editors out of 100 may prevent them from publishing news that ought to be kept back, but the folly or sense of rivalry of the 100th may cause our plans to fail and involve us in great disasters. Once a war has begun, a wave of public opinion would probably carry a bill dealing with the Press; but such a bill might become law ten days too late, and I am therefore desirous that the particulars of such a bill should be worked out in detail in time of peace, ready to come into operation when required without an instant of unnecessary delay. As we spend millions every year in providing scouts and cruisers to bring us news of the position of a possible future enemy, it is only reasonable that we should be prepared to undergo some little inconvenience to prevent his getting information as to our own proceedings.

The Russians have not been as successful as the Japanese in keeping their movements concealed. The *Times* says that:—"When the Vladivostok squadron attempted to co-operate with Admiral Viteft, in accordance with instructions telegraphed by the "Reshitelni" from Chifu, the news of its having put to sea was published in the London papers the same evening, in spite of the most stringent censorship of all telegrams, and thus Admiral Kamimura was fully informed of its movements." The result showed how essential secrecy of movement is to naval success.

For the purpose of educating public opinion, I think that the Japanese Press laws and those of some other nations ought to be translated and published in a Blue Book or in some other accessible form.

Our Home and Channel Fleets ought never to be sent far away for exercising purposes. Distant manœuvres should be left to the Atlantic and Mediterranean Fleets. The troops that form the garrisons of our naval bases should never be allowed to abandon their stations for the purpose of being trained at Aldershot or on Salisbury Plain. Staddon and Maker Heights are of more importance than the efficiency of any regiment.

Since this lecture was written I was glad to see in the *Westminster Gazette* of the 3rd May that on the 11th of this month it is intended to close Portsmouth Harbour for some hours in order to place the booms that are to be used for its protection. This is as it should be; but the same paper says that it is some years since the boom defence was tested as a whole. It ought to be tested at least once a year, if not oftener.

I am sorry to find that a good many of my fellow-countrymen do not believe in the possibility of a surprise to the same extent that I

do. I would ask all those who differ from me to read the little book that I hold in my hand. It was compiled in 1882 in the Intelligence Department of the Quartermaster-General by the present Major-General Sir Frederick Maurice, R.A., K.C.B., in answer to a question put by Sir Thomas Farrer when on a Channel Tunnel Committee.

I think that all commissioned officers in both Services, all who write in the Press on naval and military subjects, and all members of both Houses of Parliament should make themselves acquainted with its contents. It contains less than 100 pages, and its price is two shillings.

Sir Thomas Farrer's question was worded as follows:—"Looking at all that we remember ourselves, is it probable that war would be declared against us, as we might say, out of a clear sky, without any previous strain or notice that a quarrel was impending? Has that happened on any single occasion within the last 50 or 100 years?" (p. v., Preface.)

In answer to this Sir Frederick Maurice dealt with the commencement of all wars that have broken out between the years 1700 and 1870—in all 107 cases. He omits, however, the case of Hanover, in 1866, to which I have already referred. Sir Frederick writes that as far as he has been able to trace it, the Franco-German War of 1870 was the only case during 170 years in which a declaration of war preceded overt hostilities.

I see that there are short-hand writers present. How much of what I have said they may think it worth while to report I do not know; but I hope that the newspapers which they represent will be able to print verbatim the following extract from Sir Frederick Maurice's work:—"The fact is, at any rate in far the greater number of cases here recorded, the surprise which overtook the assailed country was as complete as would be the effect if *to-day*, or at any time during the last year and a half, a foreign Army had landed on the shores of England. The popular excitement, the indignant remonstrances are all features of the time, which in case after case startle one who is making such an investigation by their constant repetition." (p. vi., Preface.)

The Government of a country that attempts to surprise another will never be without a colourable pretext of some sort. If the intention is there, some excuse will be found. The usual newspaper war and the exchange of despatches gradually increasing in bitterness will be avoided. Some wretched frontier question, some alleged interference with a ship, or pretended belief in a secret treaty will be sufficient to save its face with its own people. If once the principal part of our fleet was disposed of, the opinion of the people of Great Britain would no longer count.

If our battle-ships are surprised at the beginning of a war, as the Russian ships were surprised at Port Arthur, it will be as if a bullet had gone through the heart of Great Britain.

Admiral Sir NATHANIEL BOWDEN-SMITH, K.C.B. :—In the few remarks which I shall offer on the paper that we have just heard I shall not allude at all to the question of invasion, but confine myself to the heading of the paper, which is, "The Possibility of our Fleets and Harbours being Surprised." I think the danger of our fleets and harbours being sud-

denly surprised has been somewhat exaggerated by my noble friend, Lord Ellenborough, who has brought the matter under our consideration this afternoon. It will be in the recollection of many of you that he brought the subject before the House of Lords on a recent occasion, which led to an interesting discussion, and he was somewhat fully answered by Lord Selborne, who was then First Lord of the Admiralty. It has been thought by some people that the somewhat sudden attack of the Japanese torpedo-boats on the Russian fleet anchored outside Port Arthur on that memorable night of the 8th of February last year lends some colour to the fear that our ships might be destroyed or torpedoed in a similar manner by some Power which, up to the last moment, had been in friendly relations with us; but I do not think the circumstances of the case justify such a conclusion. I would call to your recollection the fact that very serious negotiations had been carried on between the Russians and the Japanese for many months previous to the outbreak of the war, and that the attack on the Russian ships outside Port Arthur did not take place till three days after the Japanese Minister was recalled from St. Petersburg; therefore I consider the Russian Admiral ought to have been prepared for any emergency. But although I think the danger of a sudden attack on our fleets has been somewhat exaggerated, I am glad the noble lord has brought this question before us, because there are other matters in connection with a sudden rupture of peaceful relations between us and a European Power which may be considered with advantage. In the first place, there are the many thousands of foreigners living in London and others of our big cities as hotel waiters and in such-like occupations, whose presence might prove inconvenient on a sudden outbreak of war, and many of whom might be utilised as spies. Secondly, there is the serious question of the 40,000 foreign white seamen serving in our Mercantile Marine, which I consider a danger to the State and a reproach to the nation, so long as we have many thousands of our own people unemployed. There is also a third matter to which his lordship has alluded in his paper, namely, the question of alien pilots. In a statement quite recently issued by the Channel Pilots Committee, it was said there were fifty-nine aliens serving as pilots in various ports round our coasts. Fifty-nine pilots may not seem a very large number, considering the great quantity of shipping which uses our ports; but besides those fifty-nine pilots actually engaged there are probably a great many others who are retired, but whose services could be bought in time of war. I understand that British ships going in and out of foreign ports are obliged to take pilots belonging to the ports they use; I am told they are not allowed in many cases to pilot their ships themselves. Why should we be so much more confiding than other nations? I should like to see a law passed, such as has been proposed by the lecturer, that no alien should be granted a pilotage certificate for our coasts who was not a British subject or a *bona fide* naturalised subject living in the country. As I said before, I do not agree with the lecturer as to the danger of a sudden attack on our fleets and harbours; but it is well to consider the possible sudden outbreak of war in all its bearings. There is only one way, in my opinion, of being prepared for war, both on land and by sea, and that is to establish some sort of national training, to be followed by national service in time of emergency. Such a movement would ensure the security of the Empire, and it is difficult to suggest any other plan. Before sitting down I venture to express a hope that my old friend and shipmate, Lord Ellenborough, will continue to take an interest in naval matters and in the defence of the Empire generally.

Commander W. F. CABORNE, C.B., R.N.R.:—In the first place I should like to thank Lord Ellenborough for his paper, so replete with truths, and conceived in such a patriotic vein. Mention has been made of the Blue Water School, and doubtless all right-minded British men and women are members of it, so far as it advocates the maintenance of an overwhelmingly strong and thoroughly efficient Navy; but when we come to the extreme section of that school—which argues that the Navy is ubiquitous and invincible, that an Army is not required for home defence, and that fortresses are obsolete and useless—there may be a considerable divergence of opinion. The extremists themselves do not seem to repose absolute confidence in their own doctrine. For instance, an apostle of the new cult a few weeks ago attacked the Council of this Institution in the columns of an illustrated daily paper, owing to that body having accepted a generous offer made to it and undertaken to award prizes for a special essay upon a subject, selected by the donor of the money, which, in the opinion of the writer in question, somewhat clashed with those celestially-evolved tenets which he then appeared to look upon as cardinal articles of faith. Yet now we see that same correspondent expending his energies, and a considerable amount of ink, in the not too successful endeavour to prove that the primary armament of certain of our battle-ships is defective, and that in consequence the offensive and defensive power of the Fleet is not what it should be. If it were not a serious matter the situation would be ludicrous; as it is, it is illogical. The granting of pilotage certificates to aliens is a custom which we should protest against heart and soul. Recently two Dutchmen applied to the Bristol pilotage authority, under Section 599 of the Merchant Shipping Act, 1894, for pilotage certificates to enable them to navigate their own vessels in local waters; but that authority, fully recognising the dangers and evils attendant upon the present system, declined to examine the applicants. The Dutchmen then had recourse to the Board of Trade, and that Department, in the exercise of powers conferred upon it by Section 600 of the before-mentioned Act, instituted an examination, and granted a certificate to one of the men, the other being unsuccessful in passing. Fresh legislation in respect of this matter seems to be urgently called for. With regard to alien seamen and naturalised seamen in the British Mercantile Marine, my sentiments upon that point are tolerably well known to many of those present—at any rate, they are to those who study the *JOURNAL* of the Institution, and so I will not trespass longer upon your time this afternoon, the more that we are to have a lecture in this theatre two days hence upon an important subject connected with our merchant service, when I hope to be afforded an opportunity for reiterating and emphasising views which I have frequently expressed.

Admiral F. ARDEN CLOSE:—I wish first of all to congratulate and thank the lecturer for his most interesting lecture, every word of which is gospel truth. A great deal of it you will find in days gone by under my signature in the *Morning Post*. The public are slow to learn, so it cannot be too often repeated. I congratulate you and the nation that we have such a naval man in the House of Lords as the noble lord, and I only wish that we had his equal in the House of Commons, because, with all due deference to the Lords of the Admiralty (who are all good men), still there is nothing perfect under the face of the sun. For instance, if we had had a naval man in the House of Commons, I do not think all the third-class cruisers would have been put on the scrap-heap. If there

was a period in the naval history of this country when we were in danger, I am of opinion that there is greater danger now than ever; and for this reason: the Committee of Defence have issued an edict to say that the invasion of this country is "impossible." Mr. Balfour said so in the House of Commons; Lord Selborne said it at the Dolphin dinner at Bristol, and he confirmed his statement by the fact that it had taken forty-eight hours to land 14,000 men at Clacton-on-Sea. I do not blame those two gentlemen, they are landmen; they cannot know much about it, and they are therefore obliged to take the naval and military opinion of others. I do not blame those military officers who made that Report, because they had no experience. There is no officer now in the Army or in the Navy who has any experience in landing troops on a bare beach; but this I do blame them for, that when they wrote a report upon the landing, they did not say: "We beg to remind you that 60,000 men were landed in the Crimea in one summer's day." Perhaps you or they may have forgotten their military history, so I will remind you of what was done by the combined fleets of France and England on that occasion. I made a statement in a letter to the *Morning Post* that 40,000 men were landed in the Crimea in one summer's day, speaking from memory. A few days afterwards the JOURNAL of the Royal United Service Institution was published, in which the writer of the Gold Medal Essay on Invasion said that 60,000 men had been landed, and that they did not begin landing till nine o'clock in the morning. So that between nine o'clock in the morning and nine o'clock in the evening they landed 60,000 men. Is not that a warning of danger to this country, which is only too willing to go to sleep over all dangers, and requires to be roused up by the noble lord and others who will take the trouble to come here and lecture? It is a wonder to me that the merchants of London do not rise up, as they did some years ago, when they called upon Admiral Hornby to tell them what their danger was, when they saw all these third-class cruisers sent to the scrap-heap. Surely that should have been a warning to them. Where are the cruisers to come from to protect our Mercantile Marine? It is true that these third-class cruisers could not fight, and they could not run away; but every fleet requires half a dozen or a dozen such cruisers, who are not wanted to fight or run away, and who are the eyes and ears of the fleet. Now these vessels are gone we shall have to use our fast cruisers for service with the fleet, which ought to be protecting our merchant ships. With regard to Portsmouth Harbour, many years ago I published a letter in which I compared Portsmouth Harbour to a trap, and said that even the wily rabbit had his bolt-holes, so that when the ferret comes in at the front the rabbit got out at the back; it is not so at Portsmouth, where there is no second entrance, though enough money has been spent dredging in other directions to make a second entrance to Langstone Harbour. When we spoke of "the enemy" in years gone by, we always meant the French. The consequence is that our south coast is better armed than any other part; but how is it on the east coast? That is where we are threatened now. It is no use mincing matters: the Germans threaten us; why should not we answer them with schemes of defence? as Portland was created as a defence against Cherbourg. What defences have we on the east coast at the present moment? *Nothing*. If we want to prevent war, we must have as many battle-ships on the east coast as the Germans have at Kiel; and if they have between twenty and thirty, we must have our Channel Fleet at its new base in Scotland and the Atlantic Fleet at Dover. I had not the courage single-handed to refute the arguments of the great men who insisted that the coast of

the enemy was, in regard to our Navy in time of war, our frontier. Now I am glad to see such tall tactics refuted by another admiral. Nelson tried it for a year off Toulon, until his battle-ships were well-nigh worn out, and then he left his frigates to watch, as we should do now, with our new base in the north, where the battle fleet should be, fully coaled and ready, waiting for information from the cruisers that the enemy had put to sea.

Vice-Admiral Sir T. S. JACKSON, K.C.V.G.:—We have listened to a very interesting lecture and to some very interesting speeches. I do not propose to go into the question of invasion, because I think it is a little beyond the subject of the paper, which is: "The Possibility of our Fleets and Harbours being Surprised." What the effects of that surprise would be are beyond what I intend to touch upon. We may take it for granted, I think, that on the outbreak of war with any enterprising naval Power, some attempt will be made to close our ports and to make an attack on the fleet. The question is, in the first place, What is an enterprising naval Power? We were in the habit some time ago of counting the Powers simply by their battle-ships and the number of cruisers and torpedo-boats—by their material strength. But when we find that, with a considerable paper strength of fleet, a Power shows no initiative whatever, we wipe that Power off the list, and say that she is entirely negligible for the time. I do not think if you go back to history you will find that these sudden raids, or raids of any description, have ever been attempted by anybody but ourselves. Our coasts in the old wars (which, in times of fair wind, must have been very open to attacks of the raiding sort) were severely left alone, because the number of our ships was so great as to make it too risky. I think we may be perfectly certain that unless a war breaks out without previous notice, which is almost impossible, there will be sufficient time given for preparation. It would not be time for preparation for any other nation; but you must recollect that our Navy in commission is always on a war footing. We do not require any considerable notice; we are absolutely ready. It is out of the question to imagine such a case as the Channel Fleet, for instance, being surprised or caught in a hole or corner, when there was any warning whatever of differences with a foreign Power which was at all likely to attack us. My idea of the danger (and it is a very great danger) is not an attack on the fleets nor an attack on our military harbours, but the possibility of some attempt to close the mercantile harbours, and thus strike at our money-getting power by dropping mines outside the mercantile ports, where there will be practically no cruisers and nobody on the look-out. That undoubtedly is a danger which will have to be considered, and I have no doubt has been considered. Then there is another question the lecturer touched upon on which I cordially agree with him, and that is the necessity of our having some power to restrict the publication of news concerning the movement of ships. Under the present circumstances, I believe that practically we have no power to prevent such publication, and it is absolutely useless, in my opinion, to trust to the patriotism of journalists. It may be a very hard thing to say, but you might as well trust a cat-killing fox-terrier to follow at your heels when a cat runs handy for it. Although an editor might love his country, the temptation to publish the first news of a particular incident would be too strong for him. We have seen a little of that kind of thing on the part of enterprising correspondents in South Africa. There should be some power to absolutely prevent the publication of the

ordinary naval news we see in the papers. It would be absolutely necessary in time of war to at once discontinue the publication of such news.

Vice-Admiral W. F. S. MANN :—The previous speakers have said the subject of invasion did not come within the scope of this paper. I do not agree with them. The synopsis of the paper has a considerable amount to say on that subject, and it is on that part of the question that I should like to make a few remarks. We hear very much nowadays of the Blue Water School. I do not belong to that extreme Blue Water School which thinks the Navy can do everything. I have always been taught to believe that the proper place for the Navy is the coast of the enemy. If I was in command of the Channel Fleet I should feel in an uncomfortable position if I was sent away off the coast thinking of what might be behind me. The word "impossible," used by Mr. Balfour, and repeated by the Minister of War, was therefore, I think, a very unfortunate word. What is impossible nowadays? I do not see any of the foreign naval or military attachés here this afternoon, but I should like to know what they think about the possibility of the invasion of this country. What is it to a foreign country, as the noble lord said, if they get 100,000 men into this country? They do not want to get them out. If they get them in they have the country at their mercy. If we go to history you will find that no Navy, however powerful, ever finished a war. We must have a powerful Navy, but to finish a war we must have troops, and plenty of them. Except that she has no need to keep up a voluntary Army for India and Colonies, we are in much the same position as Japan. After obtaining command of the sea, how could she have carried on the war without a large Army? She prepared for this by training her population compulsorily, with the results we see. I entirely concur with Sir N. Bowden-Smith in believing that for the safety of this country we must have some form of compulsory national service. With the nation trained to arms there would be no fear of invasion, and this country would then be a valuable ally. At present, under the "impossible" policy, our fleets are tied to our coasts, instead of being free to attack.

Admiral the Hon. Sir EDMUND FREMANTLE, G.C.B., C.M.G. (Rear-Admiral of the United Kingdom) :—I did not intend to take part in this discussion, but there are just a few points to which I should like to direct attention. In the first place, I do not propose to go into the question of whether invasion is possible or probable. I entirely agree with Sir Nathaniel Bowden-Smith that the assumption of the lecturer on the question of surprising our fleets and harbours is put too decidedly, and there is not sufficient evidence in connection with what took place on the 8th February last year at Port Arthur to warrant our suspicions to that extent. If we are to act on every occasion in times of peace as if a bolt from the blue is likely to fall we cannot carry on any business at all, because our ships would not be able to go to the Mediterranean for a summer cruise or anywhere else; we should always have to keep our ships handy in the Channel; we should have to keep them well prepared on every possible occasion; we should have, in fact, to act during peace as if we were at war—an impossible state of affairs. We must take some risks. If it is the case that the comity of nations is so changed that that sort of thing can take place, all I can say is that we are in a very parlous state; but I do not think that is so. Putting that on one side,

I should like to say a few words with reference to what Sir Thomas Jackson said about the possibility of raids. We must recollect that during the French war there were a certain number of extremely successful raids, in so far as going across and landing, or being able to land, troops was concerned. I need only mention the fact that Hoche might have landed his men in Bantry Bay, but fortunately the weather and a little wholesome dread of the British Navy prevented him. We know that Humbert landed in Ireland, and had to surrender; and in Fishguard Bay it was said the Welsh women with their red cloaks frightened the Frenchmen, and they surrendered to the Militia. I simply wish to dot the i's of some of the questions which have been referred to by his lordship. I am very much obliged to him for having brought this question before us, although perhaps his views in some respects are a little exaggerated. Still, if there is a little of the "scare" about them, perhaps it is a very good thing, because so many of us are apt to go to sleep, as Admiral Close said, and to take it as natural that all will be well. There is one point that occurs to me in connection with the question of loose mines. Surely our Government should take some steps to prevent this practice; at all events to get some sort of international arrangement with reference to the practice, which we know was so generally adopted in the Gulf of Pechili, of dropping mines about here, there, and everywhere. If they are to be dropped about in that sort of way, it will be a great danger, not only to the ships of the country which is at war, but to all neutrals. Surely under those circumstances it might be possible to have an international agreement on the subject. Then there is the question of the dissemination of news, which is really a most important one. I am extremely glad it was brought before the Government the other day, but I do not think the answer given was entirely satisfactory; in fact, I do not think it was satisfactory at all. The answer made by Lord Selborne, if I recollect right, was that we should trust to the good feeling of the newspapers. I am afraid I would not trust newspapers a bit. It is absolutely the breath of their nostrils that they should get early information which is of interest to the British public. It would be, under those circumstances, of the greatest interest to the British public to know exactly what was going on; and even if some of them were reticent and were patriotic—even if the majority of them were patriotic—there is a certain number who would be only too glad to be the bearers of important news not only to our own people but to people all over the world, including our enemies. There is no doubt some step ought to be taken in regard to that question. Then there is the subject of alien pilots. I do hope his lordship will hammer away at that subject, because it is a most important one. It is perfectly monstrous, except that we look at these things from the Free Trade, happy-go-lucky point of view, that aliens should come into this country and be certified pilots in our ports. But, in addition to that, I dare say some of you, if not most of you, know that it is not at all necessary that even the captain of a merchant-ship should be an Englishman, and captains of ships can, in certain ports, be their own pilots. Therefore, we may have German or French captains of our ships piloting their own ships, and taking them in and out of ports, who would be available, if we were at war, for the purposes of the country to which they belong. Then there is another important point to which I should like to refer. In the old wars it was the rule that three of the Lords of the Admiralty (the First Lord and two others) should have houses at the Admiralty, and the object was quite clear. Many of us remember that when Lord Nelson, while in the West Indies, guessed

that Villeneuve had started on his return to Europe, not long before Trafalgar in 1805, he detached a brig, the "Curieux," to convey the news that the French were making their way towards Europe. The "Curieux" was fortunate enough to come across the French fleet, and so was able to confirm what was practically a good guess on the part of Nelson. As is narrated by Mahan and various other authorities, the captain landed at Falmouth and travelled post haste up to London, arriving at the Admiralty in the middle of the night, at one o'clock. The First Lord of the Admiralty, Lord Barham, an old naval officer, was not disturbed till about six o'clock in the morning, and he then abused his people for not calling him sooner. Although he was only called at six o'clock, by nine o'clock the orders were going down to Portsmouth, which resulted in the English fleet under Sir Robert Calder intercepting Villeneuve off Cape Finisterre. That shows the necessity of acting promptly in case of war. It may be equally necessary on such an occasion as that to which his lordship has referred, a Saturday and a Sunday following and possibly a bank holiday on the Monday. Under those circumstances it might sometimes be extremely difficult to get hold of the responsible man who could act. There always ought to be somebody at the Admiralty, or within a stone's-throw of the Admiralty, who would be capable of giving emergency orders. I will conclude by again thanking Lord Ellenborough for having brought this subject before us. I am sure that if we had a few more what I venture to call "scaremongers" like him among us it would be an advantage, especially if they are in such a position that they can bring their ideas prominently before the public.

Colonel T. M. SANDYS, M.P. (1st V.B. The Loyal North Lancashire Regiment):—It is with some hesitation that I venture, as a soldier, to make any remarks on this particular occasion. I came here as a Member of Parliament, wishing to hear the opinion of distinguished naval officers upon the important question which has been raised by the noble lecturer. I must say that I have received much information, and various opinions which I held before have been strengthened by the remarks which I have heard here to-day. I do not propose to speak at any length on the question, but I feel sure we are all grateful to the noble lecturer for the way in which he has brought forward this most important question of our national defence. I agree with him thoroughly in being somewhat of an alarmist, for I think that our national characteristic is always to shut our eyes to the danger unless it is upon us. Speaking to a professional audience of this kind, I feel sure that officers will agree with any measures which are taken by the Legislature for the purpose of being forewarned, because that means being forearmed. I do think that, in our measures for the protection of the country, much as we trust to the Navy, and highly as we hold it in our esteem, it is not entrusted entirely with the defence of these islands in any emergency which possibly may occur. The noble lecturer has referred to the necessity of treating the sea forts much in the same way as a battle-ship—that they should always be ready for action. They will be manned naturally by soldiers, for I am one of those who do not hold with taking sailors away from their duties on board ship. I think the land forts should be manned by the land forces, and that they should be ready for action at a moment's notice. With reference to the question of foreign pilots, although I have not the privilege of being a sailor, I have a large constituency where a great number of my constituents are seafaring men—the port of Liverpool. I have attended pilots' meetings at

Liverpool, where English pilots have complained bitterly that their means of livelihood are taken away from them by the admission of foreign pilots to navigate our vessels; and their Committee went so far as to formulate a Bill for introduction to the House of Commons on this very question of the admission of foreign pilots, and they did me the honour of asking me to support it, which I promised to do. I regret very much that that Bill has not appeared during the present session. I do not know why, but I trust that it will appear, and I hope if it ever reaches the House of Lords that the noble lecturer will be there to give it his support. With reference to that question, I think we shall all probably be in accord. The question of the Press is also a most important one. I must say as a soldier that I think a Press correspondent in the field is a curse, and not a blessing; and if I were a general in command of a force—which I never shall be, because I am retired—I most certainly would never allow any Press correspondent to be present with my forces in the field, but would send him back to the base of operations. We do require in this country for our own protection that there should be a stringent and sufficient Press law, capable of being put into action by the Admiralty at a moment's notice, or by the Government at still shorter notice if necessary, which would prevent news being given with reference to the movements of the British fleet or the British land forces at any time it was thought desirable. The Press is a great power in this country, but it is not safe to rely upon their patriotism to prevent giving the information which they would do, and which might be of material service to the enemy. I am old enough to recollect the Crimean War, and I remember at that time it was stated that the Russian movements against our forces were regulated by the information supplied to them by the British Press of this country—unintentionally, of course. But still it might be that among the employés on the staffs of our various papers there would be men who would not unintentionally supply information to a foreign enemy. When all that is taken into consideration, I consider there should be an Act passed capable of dealing with this dissemination of news to foreign countries. I do not know that I can say anything further on this matter, except to say that I think it most important that an officer with the rank of captain, or even higher rank, should be at all times, with his hand on the lever of the bell, if necessary, so that he could act in the same way as he would do on his flag-ship afloat. It is essential, when the safety of the country depends on the prompt action of the Navy, that they should be able to get in the first blow, which decides the fate of almost all wars; and I think that that, although it is a minor point, should not be designated as alarmist, and it is one in which I thoroughly agree with the noble lecturer. I again thank him for having brought the subject forward.

Major-General SIR THOMAS FRASER, K.C.B., C.M.G.:—I only rise to express to Lord Ellenborough the conviction I have formed that the views he has expressed, with regard to invasion, are those held by the great bulk of the officers in the Army, and particularly by those who, owing to experience gained in war, are specially competent to give an opinion on the subject.

LORD ELLENBOROUGH, in reply, said:—I am glad to see that many of my ideas are supported by the members who have spoken, and that the only difference of opinion appears to be that some of them think the danger of invasion is not so great as I have put forward. I do not

think very much of the danger of invasion unless we happen to be surprised, but I do look upon a surprise as a possible thing. Then as regards the Blue Water School, I agree with them in a great many points. It is always said, however, that it is best to have two strings to your bow. The Blue Water School should, I think, be called the Single-stringed School. It is a good string; probably quite strong enough to hold its own and to do its work, but still I do not think it is a bad thing to have a second string to your bow. There were some British bowmen, at the battle of Cressy, who had second strings to their bows, which they did not allow to get wet when it came on to rain, and we all know what became of the Genoese cross-bowmen who had not any second strings. Admiral Sir Edmund Fremantle asked if the comity of nations had so changed that sudden attacks could be made. A perusal of the little book that I have referred to will show that it has always been the custom to make sudden attacks. In this book our own country comes out as accused by other countries of doing very wrong things indeed. Perhaps we were not guilty, but still they thought that we were. With regard to an international agreement about dropping mines, it would be very nice if you could get people to draw up an international agreement on paper; but on an emergency I am sure that a foreign admiral would break the international agreement, and that he would say he was doing it for the safety of his country, and that its existence depended upon it. We should rely very little on international agreements that had not got some power behind them. They are of no use in war time. A country which went to war would take all the penalties and risks of breaking them; that is all. There are no policemen with their whistles ready to blow, asking someone to come and help them to "run in" the international house-breaker. I do not think I need trouble you with any further remarks. I think I have answered everything that requires answering, because the speakers did not, as I rather expected some of them to do, differ from me very strongly. Besides, when they did differ, they did not give their reasons for so doing. I have a quantity of notes ready to refer to which would have enabled me to answer any objection that might have been made. I am much obliged to you all for the reception you have given to me and to my paper.¹

¹A great many theories that I consider to be untenable have been deduced from the disembarkation that took place at Clacton-on-Sea last autumn. According to the accounts given by Lieut.-Colonel Telfer-Smollett in the Gold Medal Essay of this Institution, it took 36 hours to land 12,000 men and 3,000 horses. Colonel Smollett also says that the work would have been done much quicker if the men had had some previous experience in the work of disembarking on a coast, and he quotes Field-Marshal Sir Evelyn Woods as saying that many of the appliances made use of were almost as primitive as those employed half a century ago in the Crimea. From these statements I draw the inference that troops trained to embark and disembark would have done the work in much less time, especially if the ships had been equipped with more modern appliances, and that therefore a real invader would have performed that operation in less time.

In the paper that I read I assumed that an enemy who wished to surprise this country would not cumber himself with horses, as he would find plenty in England. If 6 men occupy the space of 1 horse, then at least 15,000 men could be substituted for the 3,000 horses, and a transport

The CHAIRMAN (Admiral Sir R. Harris, K.C.B., K.C.M.G.):—I think we have had a most interesting paper and an exceedingly interesting discussion—one of the best discussions I have heard in this theatre. Nearly all the points brought forward by the lecturer have been dealt with so fully that there is practically very little for me to say. But there is one point that has not been touched upon. Naval officers are brought up to be always on the look out for squalls, as we say in naval phraseology; we have to deal with the elements; and I think it is extremely improbable in time of war, or in time of prospective war, that someone will not be found at the Admiralty ready to act. I do not think we shall ever suffer on that score. I think, as Chairman, it is right to bring such an important point to your notice. I quite agree with the lecturer, that the dangers of an attempted surprise in the present day are very much greater than they ever used to be, on account of the extreme rapidity of movement which takes place everywhere. I also thoroughly agree with him that nations are not more scrupulous than individuals, who, when they want to gain a point, very often do not stick at a scruple.

fleet of the size of that which appeared off Clacton would thus carry 27,000 men with guns.

The disembarkation of such a body of men would I think be effected in less time than that of 12,000 men and 3,000 horses.

The War Office issued instructions declaring that the command of the sea was to be considered as definitely and completely secured, and that no naval opposition of any kind was to be expected. So that the transports off Clacton-on-Sea were not lying there under war conditions.

Had it been a real war and not a make-believe manœuvre, very different tactics would probably have been adopted. My solution of the problem may not be best, but I would suggest that the transports might, one hour after high tide, have been run on shore after letting go stern anchors, not only at Clacton, but also at Little Holland, where they would have been nearer to the shore.

Thus when the defenders' torpedo-boats were ready to make their attack, they would probably have found the transports empty, and even if they were not, the torpedo-boats would have found themselves unable to sink a single ship or drown a single soldier, although they might have damaged some of the ships on shore. If such an attack was made at low water, some of the Whiteheads might have struck sand before reaching the ships. Being unsupported by battle-ships, the torpedo squadron would probably have lost half its number in breaking through the enemy's screen of cruisers, and half of the remainder in trying to return to a place of safety, without having hurt a soldier.

Some of the guns of the invaders would, as soon as landed, have been placed in positions, which would have enabled them to assist in the protection of the transports.

In the case of a real war, the money value of the transports that might be damaged would scarcely enter into consideration. They could be replaced by merchant vessels belonging to other countries without breach of neutrality. In history many cases are recorded in which the invaders have burnt their ships before achieving success. In peace manœuvres the expense of the lost or damaged ships would enter into consideration, and expense is one of the reasons that make manœuvres so unreal. We are, I believe, right to continue them, but one hour of Russo-Japanese experience is worth a month of manœuvres.—E.

If some foreign nations were at war with us and wished to gain their point, I do not think you would find they would be found too scrupulous. With regard to the question of submarines, that is a very difficult question, which will have to be threshed out. There is no doubt the submarine has come to stay, and that it is improving every day. It is quite possible for submarines, as the lecturer said, to lie at the bottom all day and come up at night, and you might have a dozen or twenty of them at the bottom outside one of your harbours all popping up when they were wanted, and you might not be in the least bit aware that they were there. In considering the question of surprise, I think we neglect one important point, and that is that we have now at the Admiralty a very well organised Intelligence Department. The whole of this work at the Admiralty, I am able to say, is very much better dealt with and very much better done than it has been for years and years. We really have steadily improved in that respect, and the dangers which were very great only twenty or thirty years ago are not nearly so great now in the way of a totally unexpected surprise. I do not think there is anything more for me to say, except to give a cordial vote of thanks, on the part of the audience and of myself, to the noble lord for the most interesting lecture he has given us. I am sure we have all listened to it with the very greatest pleasure.

THE ORGANISATION AND WORK OF ARMY CORPS DIVISION AND BRIGADE STAFFS IN THE GERMAN ARMY IN PEACE.

By Major J. E. EDMONDS, R.E., D.A.Q.M.G.

THE following account of the organisation and work of Army Corps Division and Brigade Staffs in the German Army in peace has been mainly compiled from a book by General Janson, entitled "*Dienst der Truppen-Generalstäbe im Frieden.*" The duties of the General Staff *in war* are very fully described in Bronsart von Schellendorf's well-known work, and are not touched on in this paper.

So far as can be traced, the division of Staff duties between General Staff officers and adjutants was made about 1814, in imitation of the system in vogue in the Staffs of the British Army under the Duke of Wellington, under which the duties were divided between the officers of the Quartermaster-General's and the Adjutant-General's Departments.

The German Army is territorial; the Army Corps is the administrative unit, and the Divisions and Brigades which go to form it are invariably quartered in the territorial district. The greater part of the Staff work is done at the Head-Quarters of the Army Corps. The Staffs of the Divisions and Brigades are small and their work unimportant. To explain the German system, it has therefore been necessary to devote the greater part of this paper to the Staff of an Army Corps.

THE STAFF OF AN ARMY CORPS.

Strength.

The staff duties in an Army Corps are conducted by the "Chief of the Staff," who is usually a colonel, brigadier, or major-general.

He has under him:—

- 1 Field Officer of the General Staff (Section Ia);
 - 1 Captain of the General Staff - (Section Ib);
 - 2 Adjutants, Field Officers, or
Captains - - - (Sections IIa & IIb);
 - 1 "Attached" Field Officer - - (Section IIc);
 - 3 to 6 Military Law Officials - (Section III);
 - 1 Corps Intendant - - - (Section IVa);
 - 1 Corps Surgeon - - - (Section IVb);
 - 1 Senior Military Chaplain - - (Section IVc);
 - 1 Corps Veterinary Surgeon - - (Section IVd);
- and a subordinate *personnel* of registrar, clerks, and orderlies.

It will at once be observed that the combatant staff of a German Army Corps is considerably smaller¹ than that of a similar unit in any other Army, either in peace or war. General Janson states:—"That the Staff should be occasionally overworked is looked upon as a slight disadvantage compared with that of having idlers on the Staff, who merely get in each other's way or invent work to give themselves importance."

It will also be noticed that there are no Artillery or Engineer officers on the Staff. The Field Artillery is placed entirely under the Divisional generals, while the Fortress Artillery and Pioneers (Engineer troops) are, as far as technical instruction is concerned, under the Inspectors-General of these arms. All matters connected with the construction, maintenance, and armament of fortresses are under the Inspector-General of Foot Artillery and the Inspector-General of Engineers, Pioneers and Fortresses; the Empire for such purposes is divided into districts, which are not coincident with the Army Corps districts. The strategical rôle of fortresses and projects for erecting new works or demolishing old ones are subjects dealt with by the German Army section of the Great General Staff at Berlin, in consultation with the Defence Committee. As each fortress has a Commandant and staff, an Army Corps general has no responsibility for fortresses, except as regards the general discipline of the garrisons.

Buildings other than fortresses are the business of the Intendance,² not of the Engineers.

The Pay Department and the Supply Services are represented on the Staff by the Corps Intendant.

There is no Army Ordnance Corps; each unit keeps its own reserves and draws direct from some half dozen arsenals³; there is

¹ The German Expeditionary Corps to China consisted of:—

3 infantry brigades (each of 6 battalions),
1 cavalry regiment,
1 field artillery regiment of 8 batteries,
1 battalion heavy artillery,
2 light ammunition columns,
1 pioneer battalion,
1 railway battalion,
1 telegraph detachment,
1 bearer company,
7 ammunition columns,
3 supply columns,
1 field bakery column,
6 field hospitals;

Besides line of communication formations, its Staff was made up of:—

1 Lieut.-General,
1 Lieut.-Colonel Chief of Staff,
4 General Staff officers,
5 Adjutants,
1 Naval officer,
1 Field Intendant, with 4 assistants,
3 Corps Surgeons, with 2 assistants,
4 Military Law Officials,
1 Paymaster.

² Army Service Corps work in Germany is divided between the Intendance and the Train. The former is composed of officials, the latter of non-combatants. The Intendance deals with supply, allotment, and care of quarters and barrack equipment; the Train furnishes horses and drivers, and officers for supply columns, bearer companies, etc., and have no duties except transport.

³ Except in the case of certain units which do not exist in peace time (bearer companies, supply columns, ammunition columns), the mobilisation vehicles are stored at the various Train depôts under the inspection of the Master of the Ordnance, the head of the manufacturing departments.

therefore no need for a representative of the Stores Department on the Staff in peace, while in war Ordnance Stores are taken charge of by Lines of Communication Services.

Distribution of Work.

The distribution of work between the various sections of the Staff does not appear to be laid down definitely, but seems to be the result of tradition founded on some instructions issued in 1828.¹

It is usual for every officer to have distinct work; the senior officer in a section does not superintend the tasks of the juniors, unless an officer is placed under him for some special duty.

The usual distribution is as follows:—

Section I.—General Staff Officers.

Marches, movements by rail and steamer, large manœuvres, choice of manœuvre ground, mobilisation, fortresses and other defences (purposes in war), frontier protection, reconnaissances, maps, Staff, Infantry and Cavalry tours, Staff rides, theoretical winter schemes, everything bearing on the scientific education of officers, information on foreign armies, the drill books of the various arms, questions of organisation and public law as far as they concern the Army Corps.

Section II.—Adjutants² and Attached Officer.

Daily orders, garrison duties, states and reports, personal matters of officers and men, decorations, interior economy, punishments, transfers to punishment detachments, courts of honour, recruiting, reserves and Landwehr (including their training), discharges of men, invaliding, horses, arms, and ammunition, training of troops (so far as not touched by Section I.), troops on detachment, religious questions (partly in conjunction with Section IVc), printing, subordinate personnel of Staff.

Section III.—Military Law Officials³ (Chief Court-Martial Councillors: Oberkriegsgerichtsräthe).

Preparation of all legal matters which come into the purview of the Army Corps, general questions of legality, voluntary jurisdiction, inquiries into the private means of officers requesting leave to marry.

¹ Instruktion über die Geschäftsführung bei den Truppen, 12 Juli, 1828.

² Adjutantur.—These officers are practically second-class Staff officers and are not considered sufficiently competent to be employed on General Staff work. On leaving the Staff College, the students are classified:—

1. Fit for General Staff (this includes Adjutantur);
2. Fit for the higher Adjutantur (this does not include General Staff).

³ These are generally military officers, who have undergone a special training.

⁴ Before an officer is allowed to marry he must show that he has a total income from all sources of about £240 per annum.

Section IVa.—Corps Intendant.

Finance, pay duties, supply, travelling, clothing, housing of troops (in consultation with Section I.), lodging allowance, building and buildings (not fortifications), purchase and maintenance of manœuvre grounds, assistance (financial)¹, personal matters of paymasters and probationary paymasters.

Section IVb.—Corps Surgeon.

Hygiene and hospitals, personal matters and training of medical officers, training of the men of the Medical Corps, examination of recruits and invaliding.

Section IVc.—Corps Chaplain.

Religious matters and the personal matters of the evangelical chaplains and their subordinates.

Section IVd.—Corps Veterinary Surgeon.

Veterinary matters.

The Chief of the Staff (Literally, "Chief of the General Staff").

The Chief of the Staff is responsible to the General for the whole of the work of the Staff; that it is done correctly and in accordance with regulations. When a question arises which cannot be settled by a reference to the regulations, it is his duty to examine it and lay his view before the General, but he has no right to insist on his view being considered. If the question has been examined and reported on by one of the Staff, as may often be the case in matters concerning Sections III. and IV., the Chief of the Staff is still responsible to the General for the action proposed, unless the latter expressly declares that his opinion is not required. Subordinates must therefore submit all their work to the Chief.

The Chief of the Staff is further responsible for seeing that there is no neglect of orders in any part of the Army Corps. He must always bear in mind the work of the Corps as a whole, including preparations for war, so far as it is controlled by the General, and he must call the General's attention to any measures which ought to be taken.

The Chief of the Staff arranges, either with or without special directions from the General, the detailed distribution of work. He must see that every officer in Sections I. and II. keeps himself informed of the work of his comrades, and that the General Staff officers understand the Adjutants' work; this may be done by occasional exchange of duties.

If several officers are employed in working out one scheme, the Chief of the Staff must ensure that they are in constant communication in order to prevent omissions and overlaps.

The Chief of the Staff fixes the office hours both for the officers and the subordinate staff. "For the former it is more important that they should be present at certain hours and get their work done punctually than that they should have fixed times of arrival and departure.

¹ Officers may be assisted, when in financial straits, not incurred through their own folly, by gifts and loans of money.

There is no object in keeping officers in the office if their work for the day is finished; on the other hand, longer hours must be required if the interests of the Service render them necessary."

"As regards the hour of arrival, it must be borne in mind that it is most vital that officers should keep up their riding, and see as much of the work of the troops as possible. The more officers are considered in this way the greater amount of work will they do. Officers who cannot be trusted to work under these conditions are not fit for the Staff, and are best removed from it."

Office Routine.

The following is the *office routine*:—The letters are opened either by the General or the Chief of the Staff; the latter stamps them with the date of arrival, and marks those he will not deal with himself for the various sections. The papers are then passed to the Registrar, who sees that they are entered in the Journal and distributes them. Confidential documents, which should not fall into the hands of subordinates, are not entered in the Journal, but are scheduled by the Chief of the Staff himself or by the Senior Adjutant in the mobilisation Journal if the matter dealt with is mobilisation, or in the secret Journal.

Written communications between officers in the Headquarter Office are forbidden, while correspondence with the Surgeon and Intendance and Law Officials, who usually have offices elsewhere, is to be as limited as possible.

On certain days of the week all the officers and officials of the Staff assemble at the Headquarter Office to discuss business, speaking in the reverse order of their section numbers. They are usually dismissed as soon as their affairs have been dealt with, only the General Staff officers remaining to the end. Secret matters and any others on which the Chief of Staff wishes to speak in private are taken last.

Usually on other days of the week the Chief of the Staff, alone or with one General Staff officer, interviews the other officers and officials, but this depends on the General's wishes.

The Chief of the Staff usually initials all fair copies of documents and submits them to the General for signature at the next assembly of the Staff, or sends them to his house.

The Chief of the Staff is not only the first adviser of the General and director of the office routine but may have to represent him in his absence. This is laid down in the Order of 1st November, 1855:—

1. If no special substitute be appointed during the absence of an Army Corps General, the Chief of the Staff conducts the current business; he is also empowered, in pressing and urgent cases, to issue orders on his own responsibility in the name of the Army Corps General, if he is convinced that he alone is in a position to judge the circumstances correctly.
2. The General and the Chief of the Staff should not, as a rule, be absent at the same time; should it, however, be unavoidable, the powers of the Chief of the Staff under (1) do not pass to his representative. The latter is only authorised to deal with routine matters. If orders become necessary, the matter should be laid before the Senior General in the district.

An earlier Order, of the 28th August, 1814, laid down that orders signed by the Chief of the Staff should be marked "for the General Commanding" (*Von Seiten des Generalkommandos*).

A further Order of 25th October, 1877, made clear what matters the Chief of the Staff is not to deal with in the name of the General, but must submit to the Senior Divisional General or Governor, even if he is not stationed at Headquarters.¹ Under this ruling come powers with regard to Courts-Martial, Courts of Honour, punishments, complaints of officials, and transfers to the Reserves.

If a special substitute is appointed, all powers naturally pass to him. In the Guard Corps there is a special order, under which the senior General always takes charge in the absence of the General Commanding.

When representing the General, the Chief of the Staff must be careful never to censure any commander or troops; his functions are merely technical. Should there be any doubt about the interpretation of a regulation, the expressed views of his General must always be adhered to; in the absence of any such expression, the senior General should be consulted.

The manifold duties of the Chief of the Staff cannot be properly fulfilled unless the General gives him his full confidence, and does not in any way restrict his sphere of usefulness. His position is altogether dependent on the General, who may reduce him to a mere industrious head clerk or elevate him to the position of a trusted counsellor, sharing all his thoughts and knowing all his wishes.

The Chief of the Staff must, however, never seek to usurp the General's place; he must relieve him of all that is unimportant, prepare other matters correctly for his decision, and act with discretion when representing him. If he then, and only then, gains the General's confidence, his position is the most agreeable and most important that a zealous officer can attain, while still comparatively young. He will further gain if his relations with the General are not only merely official. No officer is too old to learn, least of all a Staff officer, and the Chief of the Staff will have great opportunities of receiving instruction if he is treated as a friend by his General when off duty.

At the same time, he must also be a teacher. The Chief of the Great General Staff of the Army has issued special regulations for the instruction of the General Staff officers of the Corps (including those of the Divisions) by means of Staff rides and problems. But the instruction must not be limited to these; it should be continuous but without being too apparent. For instance, it is not enough that the Chief of the Staff should correct or re-write the unsatisfactory draft of a report, he must give his reasons for the alterations or amendments; if time permits, it will be more instructive and less invidious to the junior if he is told to re-write his report from the new point of view than if the Chief of the Staff were to take the least tiresome course and re-write the paper himself.

Another important factor in the instruction is that original authorities should always be looked up, and each case judged on its

¹ The headquarters of Army Corps and of one of the Divisions of an Army Corps are frequently in the same town, e.g., at Posen are stationed the Generals Commanding the Vth Army Corps, the 10th Division, the 19th and 20th Infantry, the 10th Cavalry, and 10th Field Artillery Brigades.

merits. Care must be taken not merely to trust to official precedents; they are convenient, but lead to a most dire state of bureaucratism.

The Adjutants should be instructed and dealt with in exactly the same way as the General Staff Officers, for they and the attached field officer are also immediate subordinates of the Chief of the Staff.

With the Corps Surgeon, the Corps Intendant, and the Law Officials, matters stand somewhat differently; they are generally older and frequently senior in relative rank to the Chief of Staff, so that his relations with them require particular tact; they must in any case carry out any directions he may give with reference to work he hands out to them.

It is evident from the above that the Chief of the Staff must have a thorough knowledge not only of the regulations, but of the working of an Army Corps. The latter he must mainly acquire after the appointment to his post, and he cannot do so if he becomes a bureaucrat and does not move in the midst of the military life of the Corps. He must therefore, as far as time allows, attend the trainings of all the troops of the garrison and use the full powers accorded him for visiting all parts of the command. He is, in the first place, permitted to make a tour round all the garrisons soon after his appointment. Besides this he may accompany the General in alternate years to the spring inspections¹ and to the regimental and brigade inspections and the brigade manœuvres. He also attends, with the General Officer Commanding, the annual divisional manœuvres, any cavalry manœuvres which may take place, and assists in the reconnaissances for selecting suitable ground for manœuvres. The General may also attach him to a division for manœuvres or send him to be present at the range practices of the Field and Fortress Artillery.

Besides these operations with troops, there are the tours conducted by the General, the General Staff rides, the instructional Staff rides, as well as tours for special purposes.

During all these tours the Chief of the Staff must not only seek to make himself thoroughly conversant with all Service details, but should make the personal acquaintance of the officers and get to know the country and the inhabitants.

In the absence of the Chief of the Staff the senior General Staff officer acts for him, unless one of the Adjutants happens to be of a rank senior. An attached officer of whatever rank cannot claim to represent the Chief.

The General Staff Officers.

The First General Staff Officer (Section Ia) has the most work and the most responsible work of the command. To him are entrusted defence schemes, mobilisation, preparation for and the planning of the autumn and other large manœuvres. He therefore has much communication with the Corps Intendant (Section IV a), and also with the Corps Surgeon (Section IVb). He informs them of all they should know, without special directions from the Chief of the Staff.

Organisation questions and such as refer to Military Conventions with the other States of the Empire are also usually allotted to the senior General Staff officer.

¹ Company and battalion drill, or their equivalent.

He is, as already mentioned, the representative of the Chief of the Staff in the latter's absence; he must therefore be fully cognisant of all important matters dealt with by other sections, which have not been discussed at the Staff meetings. His position is more laborious and less easy and independent than that of the General Staff officer of a division. On account of the large responsibilities of the post, the first General Staff officer is generally selected from among the senior officers of the General Staff.

The Second General Staff Officer (Section Ib) does the rest of the General Staff work; he must always be ready to replace the first General Staff officer, and must therefore keep himself *au fait* with the work of Section Ia. It is advantageous, both for the purpose of assisting the first General Staff officer and instructing the second, if part of the mobilisation work is assigned to the latter; but it is very difficult to give him a *defined* task in it. His own work is usually light, but this is no disadvantage, as his position is really that of a learner.

The Chief of the Staff will therefore be doing him a great service if he attaches him to his person, and uses him as a collaborator in his work, as assistant in the planning and the conduct of Staff rides, instructional rides and war games, and hands over to him, regardless of the branch of the Service to which he originally belonged, the instructional question of all arms and the planning of schemes of instruction, which will make him thoroughly acquainted with the characteristics of every arm. If besides this he is given all the extra jobs and is made responsible for studying current military literature and keeping his Chief informed of all that is important, the second General Staff officer will not want for plenty of instructive work.

The Adjutants.

The principal work of the *First Adjutant* (Section II a) is the management of the "personal services" of officers, including Courts of Honour, and as a rule disciplinary punishments and transfer to the correctional detachments.¹ Part of this will usually be done in collaboration with one of the Military Law officials (Section III.).

It is desirable that all documents referring to Courts-Martial should be passed to this officer for perusal and remark as regards the incidents and procedure apart from their legal aspect. With the same object, the First Adjutant should occasionally attend the proceedings in person although the General, as confirming officer, may not do so.

In dealing with the personal matters of officers, the First Adjutant has a particularly confidential position; but he must never strive to place himself on the same level as the Chief of the Staff. The latter always controls personal services, and as a rule will conduct the affairs of the senior officers, from regimental commanders upwards, himself.

The *Second Adjutant* (Section II b) manages the rest of the Adjutant's work (see p. 813), consulting with the Corps Surgeon in

¹ These are companies of men who have committed offences against discipline; instead of being sent to prison they are stationed in a fortress and subjected to a particularly severe *régime*.

matters of invaliding and discharges as unfit for service. As regards recruiting, see under heading *Attached Officer* below.

The Adjutant who belongs to one of the mounted branches takes questions concerning horses, with the assistance of the Corps Veterinary Surgeon.

In the German Army only Princes have *Aides-de-Camp* (personal Adjutants). The Adjutants perform such personal duties as accompanying the General to public ceremonies, etc. They may be ordered to attend the General when he goes away on duty; but the usual rule is that the General Staff officers go with him to manœuvres and the Adjutants to the drill inspections. It is not desirable, however, that the Adjutants should be altogether cut off from the manœuvres, and full use should be made of the permission given by regulations to take all the officers of the Staff to the Divisional manœuvres against a marked enemy and to the Army Corps manœuvres.¹

During the absence of the Staff, the Attached Field Officer will be able to carry on the routine work, even should a part of the subordinate staff be taken to the manœuvres.

Attached Officer.

The duties of the *Attached Field Officer* (who is usually on the half-pay list: z.D.) are very variously conceived. It may, however, be accepted that in case of mobilisation he will remain behind and be appointed to the Staff of the General who takes over the district. From this standpoint it is proper to entrust him with the matters which become most important when the mobilisation has been completed and should remain in experienced hands. The first of these will be recruiting, from which the affairs of the Reserve² and Landwehr had best not be separated. It appears desirable also to keep the Attached officer fully instructed in the business routine of the Landsturm and the defence schemes, both of which are under Section I a.

As the Attached officer is the most permanent member of the Staff, and is seldom absent on duty, it is recommended that the subordinate *personnel* should be placed under him, so that he sees the Registrar's diary and gets an insight into the general work of the office, which will be most valuable to him on mobilisation. If he is also entrusted with the management of the office funds and the minor routine details of the office under the registrar (see pp. 820-821; he of course remains immediately subordinate to the Chief of the Staff), the Chief will be unburdened of much work and have time for other more important duties.

¹ The annual brigade manœuvres last 5 days; the annual divisional manœuvres last 7 days (last 2 days against a marked enemy). Corps manœuvres last 3 days (last day against a marked enemy). Manœuvres of larger bodies generally take place before the Emperor and last 4 or 5 days.

² As a rule after 2 years' service in the Active Army, men spend 5 years in the Reserve, 5 years in the Landwehr 1st Levy, 6 years in the Landwehr 2nd Levy, and 7 years in the Landsturm. The various classes are recalled to service in reverse order of seniority.

*Military Law Officials.**Section III.*

The Chief Court-Martial Councillors (*Oberkriegsgerichtsräthe*) are classed as Military Officials. They are generally officers of the Reserve or Landwehr. They do the legal work of the Staff in conjunction with such other sections as are affected — principally Section II., which deals with punishments. In this respect no definite duties are laid down for them in the New Military Code which came into force on the 1st October, 1900. They are merely the advisers of the General, who exercises such powers of confirmation, remission, etc., as are assigned to him.

Their ordinary duties are those of legal members of Courts-Martial. General Courts-Martial have as members 2 Military Law officials and 5 officers; District Courts-Martial have one official and 4 officers.

Besides these courts there are Imperial Courts of Appeal, which are formed of 3 judicial and 4 military members.

Section IV.

The Corps Intendant in his capacity as head of the Intendance of the Army Corps is responsible solely to the Minister of War, from whom he receives all directions as to administrative questions. At the same time, as head of Section IVa of the Staff he is personally responsible to the General, and entrusted with the working out of all questions concerning his section (finance and pay, supply, clothing, barracks, land and barrack building); whenever there is a question of expenditure, other sections should consult the Corps Intendant or his representative.

The agents of the Intendant are:—

1. A finance section.
2. A corps clothing office.
3. A supply section.
4. A section for administration of barracks and lands.
5. An office of building works (barracks).

The Corps Surgeon is head of the Medical Service, which is under the Medical Section of the War Office. At the same time, as Section IV b, he is a medical officer of the Staff. For mobilisation and manœuvre questions he must be in constant communication with Section Ia, and as regards discharging men as unfit and invaliding he works with Section II b.

The Lutheran Chaplain is not as a rule given office work, but when Section II is dealing with religious questions he should be called in to advise.

The Corps Veterinary Surgeon is an official who is only responsible to the military authorities; he manages veterinary questions, sometimes working with one of the Adjutants.

The Subordinate Personnel.

The subordinate *personnel* of an Army Corps Staff consists of a Registrar, 3 to 6 clerks, assistant clerks, etc., as required, among them a printer and a book-binder, and 2 to 4 orderlies.

The Registrar or Chief Clerk is very often a retired officer; but if he be a non-commissioned officer he is the superior of the other

subordinates, has the right to wear plain clothes, and is generally looked upon as an official; usually he has been promoted from clerk.

He has a great deal of responsible work, for in addition to his duties of Registrar, he is charged with the supervision of other Staff offices of the command, is in charge of the subordinate *personnel*, and has a mass of confidential matters passing through his hands, although secret papers are registered by an officer.

He is responsible for indexing and putting away all papers. He cannot be expected to know every precedent, but he must be able to put his hands on papers dealing with any particular class of matter. He must have a perfect memory; the most capable man available should be chosen without regard to seniority.

No officer or official, except the General or the Chief of the Staff, has the right to give the Registrar orders, except for drawing previous papers on a subject; the officer concerned is responsible that he gets the correct ones.

The Registrar should usually keep the following lists:—

1. Two date calendars, one for regular recurrent matters and one for special non-recurrent questions.
2. A black-list, arranged by sections, showing the papers which have been distributed but not dealt with and returned. This list is best made up weekly, presented each Saturday to the section concerned, and once a month to the Chief of the Staff, who can then see if there are undue delays.
3. A schedule of all papers received, arranged under two headings, general and special.
4. An index of printed matter.
5. A cash-book for the office funds.
6. A list of addresses of transferred, half-pay, and retired officers, so that they can be communicated with.
7. A list of officers on general leave.
8. A rough journal showing by their schedule numbers any papers which may be sent out, etc.

The *permanent clerks* are usually distributed to the officers of Sections I. and II. for work, and are immediately at their disposal. Papers approved by the General will be prepared or copied by any clerk to whom the Registrar may hand them; but in cases of necessity a particular clerk may remain entirely at the disposal of one of the officers.

One of the clerks will keep the rough journal of papers coming in and going out; the entries must always be made in it at the time. Directly a paper is scheduled its reference number should be put in the rough journal.

The *assistant clerks* are usually only employed as copyists, but they may be told off to particular sections; the number employed is to be kept as low as possible, and will therefore be variable.

The printing press should be used freely so as to reduce the amount of copying which has to be done by subordinate commands and units. The *printer* will therefore be employed continuously; as also the *book-binder*, who will bind up the documents and put away papers under the superintendence of the Registrar.

The work of the *orderlies* in fetching and carrying letters requires careful arrangement. Their work will be simplified by having a central military post-office or exchange. In order that their military

training may not be neglected, they must be changed every month, or at least every three months; they will be taken from second-year men or from men who have volunteered for extra service. The printer and book-binder must also be changed; but there is nothing to prevent them being detailed for a second tour of service in the Head-quarter office.

The subordinate *personnel* has fixed working hours; a pause is allowed for dinner, during which one or two clerks must remain.

One orderly must remain on duty during the hours that the office is closed, in case he is required, and during this time a notice on the door of the office should say where letters, etc., are to be taken.

There will usually be a certain number of standing orders in every office for the regulation of business.

STAFF OF A DIVISION.

The staff of a division is usually composed of:—

- 1 Major or Captain of the General Staff (Section I.).
- 1 Adjutant, Major or Captain (Section II.).
- 2 Military Law officials (Section III.).
- 1 Divisional Intendant (Section IV a.).
- 1 Divisional Surgeon (Section IV b.).
- 2 or 3 Chaplains (Lutheran and Catholic).

With a subordinate *personnel* of:—

- 2 Permanent clerks.
- Assistant clerks.
- 1 Printer.
- Orderlies.

The division of work is practically the same as in the Army Corps, but the scope is naturally not so great, nor are the proportions of the various parts of the work to each other the same.

Recruiting matters are not dealt with (except in the Hessian Division, No. 25), and the independent work in connection with mobilisation is very small. On the other hand, the work of planning and conducting manœuvres and making them fit into the time available is heavier.

There is no Chief of the Staff. The instructions of 22nd May, 1822, which are still valid, lay down that "the General Staff officer or Adjutant, whoever is the senior, is responsible for the regulation of business and its prompt execution." But the position of "senior" has only duties and no rights, and therefore the senior does not represent the General, is not necessarily present at interviews which the General may have, and has no influence on the work of sections other than his own.

Any changes in the distribution of work can only be ordered by the General. The senior cannot issue orders; he may, however, be authorised to sign simple notifications "by order." His work consists therefore in distributing correspondence, etc., to the sections, in inspecting and conducting the work of the subordinate *personnel*, and seeing that there is no undue delay in carrying out business by watching the "black-list" and letting sections know that they are behindhand. If this has no effect, he takes no further measures, and has nothing to do but to inform the General.

The subordinate personnel has no Registrar; the senior clerk undertakes the work. Owing to the smaller amount of correspondence a rough diary need not be kept.

THE STAFF OF A BRIGADE.

The staff of a brigade consists of one Adjutant (a captain or lieutenant), one or two clerks, and some orderlies. As the brigade has no General Staff officer, as in other Armies, the Adjutant has, in a small measure, many General Staff duties, particularly in the planning and conduct of the brigade manœuvres. In these matters the Brigade Adjutant requires a thorough training. The Brigadier cannot, however, expect an officer new to the post to be a complete master of the subject, and must give him much instruction, particularly as regards the planning of manœuvres.

A BRIEF HISTORICAL SKETCH OF THE IRISH INFANTRY REGIMENT OF DILLON AND THE IRISH STUART REGIMENTS IN THE SERVICE OF FRANCE, 1690-1791.

Continued from June JOURNAL, p. 701, and concluded.

WE must now go back a few years and briefly trace the tragic ending to the career of the brilliant Lally. It has already been related how he was promoted to Major-General for his services at the siege of Maestricht in the summer of 1748, and it was during this siege that Marshal de Saxe paid him the high compliment in his despatch to the King, of writing: "On peut dormir tranquillement. Lally est à l'armée."

In 1756 he accepted the command of an expedition against the English in India, the plan of campaign for which he had himself drawn out, and was at the same time appointed Commissioner for the King and Commander-in-Chief of all the French Establishments in the East Indies. The affairs of the French East India Company were not at that time in a satisfactory condition, in spite of a subsidy from the Crown. A desire to grow rich by any means animated all classes of officials in the East, so speculation and corruption reigned everywhere, while vast sums were expended, not only in war against the English, but still more in pursuit of territorial aggrandisement and political influence at the cost of the native princes, who were generally divided and weakened, amidst the general anarchy attendant upon the dissolution of the Mogul Empire. The Directors of the Company were unquestionably sincere in their desire that a remedy should be found for the existing state of affairs and they now approached the French Minister of War, Count d'Argenson, with a request for a reinforcement of 3,000 of the King's troops, to be joined with their own, and at the same time requested that Count Lally, as an officer of well-established reputation and no common energy, should be appointed to the command, with full powers to enable him to bring order out of chaos. The Count, a sagacious and well-intentioned Minister, a great friend of Lally's, disapproved strongly of his acceptance of the appointment, as he foresaw that the numerous and powerful cliques on the spot, who were interested in the maintenance of the *status quo*, would stick at nothing to wreck any schemes of reform, and that Lally's temperament was not of the kind to meet with success the nefarious tactics which would be employed against him. In this sense he wrote to the Directors of the Company:—"C'est du feu que son activité,"

. . . Il ne transige pas sur la discipline, il a en horreur tout ce qui ne marche pas droit, se dépite contre tout ce qui ne va pas vite et l'exprime en des termes qui ne s'oublient pas. . . . A la première négligence qui compromettra les armes du Roi; à la première friponnerie, M. de Lally tonnera, s'il ne sévit pas. . . . On fera manquer ses opérations pour se venger de lui."¹

The Minister's forebodings were not long in being realised. Before Lally started, things were already going wrong; he was to have had a considerable force of European troops, among them being his own regiment, raised to two battalions, or 1,200 men, *tous gens d'élite et de bon volonté*, and the Regiment of Lorrain, with ships and money in proportion. In the end he was forced to leave with only two-thirds of the expected number of men, although reinforcements, which never came, were promised him, and without the necessary funds and stores. He reached Pondicherry at the end of April, 1758, but, as d'Argenson had predicted, from the time of his arrival he met with the most malevolent opposition to all his schemes.

Although he had been expected for eight months, he found nothing ready for him, not even provisions for his troops. Animated, however, with the hope of winning his Marshal's bâton, by effecting such a military revolution in India as would repair the honour of the French arms and humiliate the English, Lally at once set to work and as he found himself without the means and facilities for military operations, to which he had been accustomed in Europe, he resolved to create them.

It is impossible here to follow the campaign of the next three years. It must suffice to say that Lally, before the end of 1758, had reduced Cuddalore, Davacotah, Fort St. David—style from its strength the Bergen-op-Zoom of India—in which fortress he captured a vast quantity of stores, 108 guns, a considerable amount of specie, and with the whole Coromandel coast in his hands was threatening Madras, where the greatest alarm prevailed. But in November the authorities at Pondicherry informed him that they could no longer subsist or pay his army; under these circumstances he was compelled to delay his advance, time being thus given to the garrison of Madras to put it in a state of defence, and it was not until the middle of December that he arrived before the town, which, in spite of everything, he might have captured, had he been supported by the French Admiral. This officer, paying no heed to Lally's urgent remonstrances, left him in the lurch and sailed for the French islands in the Indian Ocean, thus leaving the way open for the

¹ "He is on fire with activity. He makes no compromise with respect to discipline, has a horror of everything that is not straightforward, is vexed at everything that does not go on rapidly, and expresses himself in terms not to be forgotten. At the first act of negligence that will compromise the arms of the King, at the first appearance of roguery, M. de Lally will thunder forth, if he does not resort to severe measures. . . . They will cause his operations to fail, in order to be revenged upon him"; and then, he concluded, "Pondicherry will have civil war within its walls, as well as foreign war at its gates. I think the plans of my friend are excellent, but a person, quite different to what he is, ought to be charged with the execution of them."

garrison to be reinforced from the sea, which was done on 16th February, 1759, six hundred Regular troops and a large quantity of supplies being landed. Thus deserted by the fleet, without money to pay his soldiers, who were in a state of semi-mutiny at the hardships they had to endure, Lally was forced to raise the siege, leaving behind him fifty-two of his guns, but retreating unmolested by the enemy.

During the summer of 1759, Brigadier-General Eyre Coote, who had been appointed to the command of the English forces, arrived at Madras with further large reinforcements and the tide of war turned definitely against the French, greatly outnumbered as they were now by the British, while of the promised reinforcements from France, only 180 men had arrived! On the 22nd January, 1760, Lally was decisively defeated at Wandewash by Coote, with a loss of 22 field pieces and 433 killed, wounded, or captured, out of his small force of 1,300 European troops. By May, Coote, at the head of a force of some 20,000 troops, Europeans and sepoys, had recaptured all the places seized by Lally two years previously, who was now himself invested in Pondicherry, where, after nine months' heroic resistance, abandoned again by the fleet, and at the end of his resources, he was forced to surrender on the 15th January, 1761, with 700 men—all who remained to him. Coote, in addition to his overwhelming superiority in numbers, was supported by a squadron of 14 ships, eight of which were ships of the line.

Sent prisoner first to England, the unfortunate Lally, released on parole, returned to France, only to be arrested and shut up in the Bastille on the 5th November, 1762, on a number of malevolent and trumped-up charges, very much what happened to Clive and Warren Hastings, the prime movers against him being Bussy, the late Governor of Pondicherry—who had very powerful Court influence at his back—and his Council, whose implacable enmity Lally had incurred, as d'Argenson had foreseen, by his attempts to reform the Administration. In July, 1763, to the lasting disgrace of the Monarchy, which he had served so well, an iniquitous process was instituted against him and he was arraigned before Parliament—a court-martial having been denied him—on various charges of "abuse of authority, extortion, oppression, and high treason," one of the charges being that by peculation and extortion he had amassed a fortune of 17,000,000 crowns, while the truth was that he had spent the whole of his private fortune in trying to support his army, when Government funds were no longer forthcoming. On the 3rd May, 1766, although not one tittle of evidence had been produced against him, he was condemned to death, the Ministry and the Court having agreed to make him a scapegoat to cover the malpractices of others and also divert the popular discontent at the disastrous termination of the war from themselves. After being subjected to every possible indignity, Lally was executed on the 6th May, 1766, in his 65th year, after 55 years of distinguished service, dating from his boyhood, and during which he had been more than once badly wounded.

Voltaire called the death of Lally: "Un assassinat commis avec le glaive de la justice," and it is satisfactory to know that twelve years later his memory was fully vindicated, and the King—then Louis XVI—with the unanimous assent of the Council and Parliament, reversed the sentence which had been passed as unjust and

illegal, his son being re-granted the title of Count and Marquis of Lally-Tollendal.

In the beginning of 1779, Count Arthur Dillon having requested that his Regiment might be permitted to serve in America against the English, the 1st Battalion, completed to a strength of 1,400 officers and men by large drafts from the 2nd Battalion, embarked on the 27th March for Martinique, where it arrived six weeks later. The Berwick and Walsh (Ormond's) Regiments were embarked for the West Indies at the same time, a certain number of men from each of these regiments being distributed among the ships of the fleet, where they acted as Marines. On the arrival of these reinforcements, the Count D'Estaing, who was in supreme command of the French naval and military forces in the West Indies, and who, up to that time, had not felt himself sufficiently strong to take the offensive against the English, now determined to carry out his long-meditated design of seizing the Island of Grenada. On 30th June, having embarked 700 men from the regiments of Champagne, de Foix, d'Auxerrois, and de Hainault, with the whole of Dillon's in the ships of his squadron, he weighed from Martinique, anchored off Grenada on the 2nd July and immediately landed his force, the English garrison, under Lord Macartney, which numbered only some 700 men, retiring to a strongly fortified position on an eminence known as the Morne de l'Hôpital. This height, which commanded the town and harbour, besides being very steep and rugged by nature, was further strengthened by walls of stone, raised at intervals, behind which was a strong palisade and three entrenchments, rising one above the other. The 3rd was spent by D'Estaing in reconnoitring, but being afraid that Admiral Byron might arrive with his squadron to relieve Macartney and having no artillery with him, he determined on carrying the position by a *coup de main*; and he accordingly arranged that on the night of the 3rd-4th, the attempt to storm should be made. The attack was delivered by three columns, two of which were furnished by Dillon's, and were under the command of Count Arthur and his lieutenant-colonel, Edward Dillon, respectively, D'Estaing himself being in supreme command and, sword in hand, heading the first column. In spite of the gallant resistance of the small garrison, the position was carried at the point of the bayonet, Dillon's, as usual, distinguishing itself by the fury of its attack; "Le régiment de Dillon," reported D'Estaing, "quoique maltraité par le feu, ne ralentit pas un instant son attaque." Lord Macartney, 700 officers and men, three colours, 102 guns and 16 mortars, were the trophies of this brilliant little exploit, while over thirty vessels, twenty of which were richly laden merchantmen, were captured in the harbour.

Learning that Byron was approaching, D'Estaing, leaving three hundred and fifty of Dillon's to garrison the town and citadel, re-embarked the remainder of his troops and on the 6th July engaged Byron off the island, who had with him eighteen sail of the line and

¹ In his own account, Count Dillon says:—"On a vu que les régimens Irlandois ont été constamment employés dans toutes les guerres précédentes; ils ont toujours réclamé le privilège de marcher les premiers contre les Anglois dans tous les climats où la France leur feroit la guerre. C'est d'après ce principe que le Régiment de Dillon demanda et obtint de passer en Amérique au commencement de 1779."

a frigate, with which he was convoying, a number of transports with troops to re-enforce Macartney, as he thought, being unaware of his surrender. D'Estaing had twenty-five sail of the line under his flag, and the result of the action was, that the British Admiral, in consequence of the disabled condition of his fleet, found it necessary to take shelter under St. Christopher's, where he remained, awaiting reinforcements, leaving the French for the time masters of the sea.

After vainly trying to draw Byron from his safe anchorage in Basse Terre Roads, D'Estaing determined to attempt the capture of Savannah; disembarking his troops on the 12th September at Biowlay, in Georgia, some twelve miles from the town, he effected a junction with a force of 3,000 Americans, under General Lincoln. Four days later, he laid siege to the town, but the place was strong and little progress was made, while his troops, who were encamped without tents in the swamps, with continual rain, suffered much from the exposure, while, owing to their distance from the fleet, on which they were dependant for supplies, rations were very irregularly served out. As the season, when operations were possible, was coming to a close, D'Estaing determined to attempt to carry the town by assault at daybreak on the 9th October. The assault was headed by D'Estaing and Lincoln in person, while Count Dillon, with his regiment, was directed to move round the edge of the swamps and attack the rear of the British lines. But both the direct and flank attacks were met with so heavy and well-directed a fire, that the columns could make no headway, and were eventually driven back with a loss of some 1,200 killed and wounded, of whom eighty were officers, among whom was the intrepid D'Estaing himself, who was wounded in three places, Dillon's, as usual, losing heavily. Count Arthur Dillon assumed the command in D'Estaing's place, and the next day, unmolested by the enemy, he raised the siege, and withdrawing his guns and baggage, re-embarked his troops and sailed on the 21st for Grenada, which was reached twelve days later.

During 1780, Dillon's remained at Martinique, but a detachment, with a draft from Walsh's, was embarked on board some of the ships of the Count de Guichen, who had now relieved D'Estaing, and took part in the actions of the 17th April, and 15th and 19th May, with the English fleet under Rodney.

On the 1st March, 1780, Count Arthur Dillon was appointed Brigadier, while retaining the proprietorship of his regiment, but in accordance with a Royal decree of the 5th April, 1780, his title of colonel was changed to that of *Mestre de camp*. In the following month he transferred the command of the Regiment to Count Theobald Dillon, who was killed at the siege of Lille in 1792.

In the early part of 1781, 700 men of Dillon's were embarked on board the "Ville de Paris," the flag-ship of the Count de Grasse, and took part in the action of the 3rd May, off Martinique, between the French fleet and the English, under the command of Sir Samuel Hood. They were next landed on the Island of Tobago, where the Regiment of Walsh had also been disembarked, and the two corps took a leading part in the final conquest of the island in June, by the Marquis de Bouillé, who had assumed command of the land forces in the West Indies. Both regiments then returned to Martinique.

On the 15th November of the same year the Marquis, who had determined to turn to account the absence of the English fleet to

attempt the re-conquest of the Island of St. Eustache, embarked twelve hundred men from the Regiments of Dillon, Walsh, Auxerrois and Royal-Comtois with three hundred Grenadiers, and arrived off the back of the Island on the night of the 25th-26th November, a point where no danger of a hostile landing was feared by the Governor and garrison, owing to the natural difficulties of the coast and the strong currents. Immediate preparations were made by De Bouillé for disembarking his troops, and he, with Count Arthur Dillon, who was his Brigadier, and some four hundred men succeeded in landing by 4 a.m., a little before daybreak, but by this time the wind had freshened so much that his ships could no longer keep in to the shore, and the sea also getting up, the boats were driven on to the rocks and smashed up, the Marquis thus finding himself cut off from his fleet, with only a fourth of his troops with him and no artillery. There was no possibility of extricating himself from his dangerous position, except by advancing at once and trusting to surprising the enemy before they awoke from their fancied security and became aware of the presence of the French. Encouraging his troops, he had at once moved forward, Count Dillon and the Irish leading; the distance to be traversed before arriving at the fort was some six miles, which was covered, in spite of the difficulties of the country, by 6 a.m.; a part of the garrison was on the parade ground at drill, but the surprise was complete, and although the alarm was at once given, the French rushed the fort before the draw-bridge could be raised, and the rest of the garrison, with the Governor, finding resistance hopeless, surrendered. The French loss is said to have been only ten men, and these were drowned; while, in addition to several killed and wounded, 850 English troops were made prisoners and four colours captured. A valuable amount of booty was secured by the victors, including a large sum of money, each private soldier receiving 100 crowns, in addition to which several vessels were captured, which were lying in the roads. The following day the adjacent islands of Saba and St. Martin, with their small garrisons, also surrendered. In his report to the King, the Marquis de Bouillé, while stating his inability to do justice to the gallantry and discipline of his troops, alleged of Count Arthur Dillon:—"Le Comte de Dillon a donné de nouvelles preuves de son zèle et de son activité extrêmes." Among the English prisoners were 350 Irish Catholic soldiers, who enlisted voluntarily in the Dillon and Walsh regiments, which were by now, sadly reduced in their numbers.

Early in 1782, Dillon's was employed in the expedition made by De Bouillé to capture the Island of St. Christopher, and took a prominent part in the capture of Brimstone Hill, styled the "Gibraltar of the Antilles," which surrendered after a siege of thirty-one days. Count Arthur Dillon was appointed Governor, and proved himself so well qualified for the task, that when the Island was restored to England at the conclusion of peace in 1783, all his regulations and ordinances were confirmed, and he was officially complimented by the English Government, for the eminent administrative ability he had displayed, his regiment remained to garrison it, a small detachment of fifty men being drafted for service as Marines in De Grasse's fleet, in which they were present in the battle of the 12th April of that year, when De Grasse was defeated by Rodney. At the same time, six hundred

men of the 2nd Battalion, the date of whose arrival from France is not given, were sent to garrison San Domingo.

Towards the end of the year, the 2nd Battalion of the Regiment of Berwick arrived at Martinique, but the war was now drawing to a close, and on peace being signed on the 3rd November, 1783, the 1st Battalions of the three Regiments of Dillon, Walsh, and Berwick, appear then to have returned to France. With this war terminated the strictly military career of the Irish Brigade in the service of France, although the complete break up of the national element in the different regiments still existing did not occur until 1791, after the outbreak of the French Revolution.

Like so many others, the gallant Count Arthur Dillon fell a victim to the Revolution. In 1786 he became Governor of Tobago, where he remained three years, when he returned to France as Deputy to the States General in 1789, in which capacity he was a steady defender of the Colonial interests. When war broke out in 1792, and France was invaded by the Austrians and Prussians, he was made a General of Division and appointed to the Command of the Army of the Ardennes, where he shared with Dumouriez the honour of driving back the invaders. In 1793, he was appointed to the command of the Army of the Rhine, but being denounced as a Royalist and Aristocrat, was summoned to Paris, where after trial he was guillotined on 14th April, 1794. His name was engraved on the Arc de Triomphe and his portrait hangs in the gallery at Versailles.¹

In 1791, the Brigade in the service of France consisted of the three Regiments of Dillon, Walsh (originally Ormond) and Berwick each consisting of two battalions; and they were the sole survivors of the two Regiments of Horse, and thirteen of Foot of James II.'s Army, some thirty thousand strong, which were taken into the pay of France in 1688-89. These three Regiments were distributed in 1791, as follows:—

Dillon's	1st Bn. Lille.
	2nd „ San Domingo.
Berwick's	1st „ Besançon.
	2nd „ San Domingo.
Walsh de Serrant (Ormond's)	1st „ France.
	2nd „ San Domingo.

The end of the Brigade had now come. By a decree of the National Assembly, 21st July of that year, all regiments, excepting the Swiss, which had hitherto been named, clad, and paid, as foreign corps, were no longer to be distinguished from, but placed in every respect on the footing of French regiments; in this decree, concerning the *troupes étrangères au service de France*, the Irish Regiments were included. But the hostile attitude of the National Assembly towards the throne and church had already alienated, to a considerable extent, the loyalty of the Brigade to its adopted country, and the result of the decree was seen in the secession in 1793 of the great bulk of the officers and men from the service of the new *régime*, and their following the Bourbon Princes into exile.

In September, 1794, William Pitt, desiring to draw the Irish Brigade from the service of France to that of England, entered into

¹ History of the Irish Brigades in the Service of France. By J. C. O'Callaghan.

relations with the Brigade through Count O'Connell, a Lieut.-General of France, who had emigrated. These negotiations were continued by the Duke of Portland, who, in the name of the King, formally invited the Duke of Fitzjames — the grandson of the great Duke of Berwick, great-grandson of James II. and titular commander of the Regiment of Berwick — into the English service, "with the Regiment of the Marshal de Berwick, and with the Irish Brigade, on the same footing that it had been in the service of his Christian Majesty," and he stated that it was the intention to add a fourth regiment to the Irish Brigade and place it under the command of O'Connell, one of the most distinguished officers in the old French Army, who had accompanied the Bourbon Princes into exile. The offer was accepted, and the Brigade was brought over by the Duke of Fitzjames, but from the following memorial of the Duke, there seems to have been a certain amount of friction or misunderstanding.

MEMORIAL BY THE DUKE OF FITZJAMES, 1796.

(*MSS. 33,102, British Museum.*)

"The Duke of Fitzjames is not ignorant of the extreme modesty which is always expected from the unfortunate, but he feels also that misfortunes like his are truly respectable, and he has too high an esteem for His Majesty's Ministers to fear telling them how much he is hurt at the unexpected treatment he meets with at present.

"Being on the Continent in the month of October, 1794, he received His Majesty's gracious invitation, through the medium of His Grace the Duke of Portland, to enter into the English service with the regiment of the Marshal de Berwick, and with the Irish Brigade on the same footing as it had been in the service of His Christian Majesty. The delicate manner in which this invitation was expressed made the Duke of Fitzjames consider it as a very signal favour on the part of His Britannic Majesty, and left him no room to hesitate one moment in accepting it. His Majesty's invitation was forwarded from England on the 30th of September, 1794, and the Duke of Fitzjames, who renounced every other project, arrived in London with all his family before the 15th of October following. His Grace the Duke of Portland observed in his letter that a fourth regiment, commanded by M. O'Connell, would be added to the three ancient regiments of the Brigade, Dillon, Berwick, and Walsh.¹ The Duke of Fitzjames, knowing M. O'Connell to be one of the most distinguished officers in the French Army, applauded this measure. But there was no mention made in His Grace the Duke of Portland's letter of the plan for adding a fifth and afterwards a sixth regiment to be commanded by two brothers, whose services, however meritorious they might be in other respects, separated them entirely from the Irish Brigade. It was incompatible, both with the name and the character of the Duke of Fitzjames to propose depriving any one of His Majesty's favour. However, he was constrained, both by duty, and by his ardent desire for promoting the good of the service, to observe to the Minister that the Irish Brigade being in its present

¹ Colonel Count Walsh de Serrant—92^e of the French Line: The Irish Guards.

state composed of officers only, without soldiers, it was much to be feared the raising of three new regiments would prevent the three ancient ones from being completed. The levy of the three new regiments (of which one was to be named O'Connell, and the other two Conway), was definitely decreed, as was also the re-establishment of the three ancient ones.

"The elder of the Mons. Conway died in the month of June, and was succeeded by Mon. Walsh, brother to the Count Walsh de Serrant, and Lieut.-Colonel in his brother's regiment, so that there were two regiments of the name of Walsh. In the French Army the precedence among the ancient Irish corps was regulated according to the date of their arrival in France in the year 1688, and was as follows:—Dillon, Berwick, and Walsh (originally Ormond's). Since their entry into the English service, they have been ranked according to the seniority of the service of their present Colonels, and have been classed thus:—Berwick, Walsh, and Dillon, for the ancient regiments, and O'Connell, Walsh, and Conway, for the new regiments. To the real difficulty of raising men to fill up six regiments has been added the delay (no doubt unavoidable) of the arrival of orders from the Minister without which the Colonels could take no measures of recruiting.

"These Colonels were all in England in the Autumn of 1794, but did not receive their orders for levying men before the month of July, 1795.

"The Duke of Fitzjames went to Ireland, where he as well as the other five Colonels experienced the difficulty which he had foreseen, and announced to the Minister. He spared neither pains nor expense to surmount this difficulty and to make the regiment of Berwick appear with the same advantages in England as it had always done in France. He had already collected a considerable number of excellent men, when in the month of March last two hundred of his soldiers were drafted off and incorporated in the regiment of Dillon, and Walsh (Junior), under the pretence that the two regiments having the greatest number of men were to be completed from those which had the fewest; this plan, it was said, was to be put in execution at the first review with regard to the other four corps. Although these arrangements were contrary to the tenour of His Grace the Duke of Portland's letter written in the name of His Majesty in 1794, which letter alone determined the Duke of Fitzjames to come to England, yet he could have willingly yielded thereto with regard to the regiment of Dillon, which was the first that passed into France in 1688, but as the regiment of Walsh, Junior, the Duke of Fitzjames cannot help observing that to complete it from the others is to establish too great an equality between the ancient and the new Brigade; between the regiments which have reaped laurels on the field of battle during a hundred years, and the three new ones which are just forming.

"The announced review took place at New Geneva, the 17th inst., the returns prove that till the eve of the review the regiment of Berwick, or Fitzjames, had constantly had the greatest number of men. The Count Walsh received an unexpected supply of 180 men the day before the review, in consequence of which those of Berwick, O'Connell, and Conway, were immediately incorporated into his regiment, and it is now said that the regiments of Berwick, O'Connell, and Conway are to be dissolved, and the officers reduced to half-pay.

The letter of His Grace the Duke of Portland, which brought the Duke of Fitzjames and all his family to England, contains the following words:—‘His Majesty authorises me to offer you the same rank of Colonel in this new corps as you had in the ancient; as to your Grace’s quality of Proprietor I must desire you to remember that our constitution admits of no such privilege. However, although your place is only entrusted to you for one year by the Legislature, yet the possession of it may be considered as certain during your good behaviour, and that, I am sure, cannot be shorter than the duration of your life.’ Can anything be alleged against the Duke of Fitzjames’ conduct? He must at least be allowed to say that neither he nor any of his officers of the French Army where that Brigade was as much honoured as it was beloved, will see without astonishment that after it having been taken into the English service, after being increased to six regiments, and then reduced to three, the last result is to exclude from it the regiment of the Marshal de Berwick, commanded at present by his grandson, a French Peer, and a general officer who has passed forty years of his life in the military service, and before him by two Marshals of France, the first of whom was the Duke of Berwick, Peer of England, and of France, Grandee of Spain, but whose name alone was his most honourable title. After these observations, which are made with extreme reluctance, the Duke of Fitzjames has reason to hope that His Majesty’s Ministers will favourably attend to the new proposal which he has the honour of laying before them at present. The Duke of Fitzjames would be less concerned on this occasion, were it not the fate of others inevitably involved with his own. He cannot possibly persuade himself that after the generous invitation of His Britannic Majesty, which made him abandon every other pursuit, and place all his hopes in England, he will be reduced to the half-pay of £150 for himself, the Duchess of Fitzjames, and a numerous family.”

“London, 29th September, 1796.”

The Duke’s apprehensions were justified; the Berwick Regiment was broken up, and himself reduced to half-pay. The old and the new regiments of the Brigade were sent to the West Indies, where they were disbanded or, more properly, were allowed to die out in 1798. In 1820 there remained only eighteen of the officers on half-pay.

The second battalions of the three regiments, as already mentioned, had been left to garrison San Domingo, when peace was concluded in 1783. In 1793, war again broke out between France and England, and in September of that year, encouraged by Royalist overtures from San Domingo, Commodore John Ford, in command on the Jamaica Station, embarking some troops at Port Royal, sailed for Jérémie, and St. Nicholas Mole, arriving off the latter town on the 21st, and induced the place to capitulate on the 22nd, the garrison, which was composed for the most part of the 2nd Battalion of Dillon’s, agreeing to the terms as follows:—“The Staff, the Detachment of Royal Artillery, and the 2nd Battalion of Dillon, composing the garrison of Cape St. Nicholas Mole, accept the above conditions, request to continue upon their establishment, and to be taken into the pay of Great Britain; and if, at the general peace, the Colony of St. Domingo shall remain in possession of His Britannic Majesty, and the above-mentioned French officers cannot, by the laws of

England, continue in His service, they shall in such case be entitled to half-pay for life.

"We, the Commanders and Staff Officers of Cape Nicholas Mole, Commander, Officers, and Soldiers of the 2nd Battalion of Dillon, Officers and Soldiers of the Corps of Royal Artillery, Inhabitants and Proprietors of the town of the Mole, accept, as far as we are individually concerned, and for the other inhabitants of same, the fourteen Articles of the above Capitulation, promising faithfully to adhere to every part of them.

"Done at Cape St. Nicholas Mole this 22nd September, 1793.

"Signed by the Staff Officers, the Officers of the Royal Artillery, and those of Dillon, and several Inhabitants of Cape Nicholas Mole, and accepted by Commodore Ford."

Although no special mention is made of the surrender of the 2nd Battalions of the Regiments of Berwick and Walsh, they must have done so on the occupation of the other towns of the Island by the British Forces.

This brief sketch may be fitly concluded by recording the incident which, for practical purposes, mark the breaking of the tie which for one hundred years had attached the Irish Brigade to the French Monarchy.

At Coblenz, in the autumn of 1793, the refugees of the Regiment of Berwick presented the following address to the Count de Provence, afterwards Louis XVIII.:—

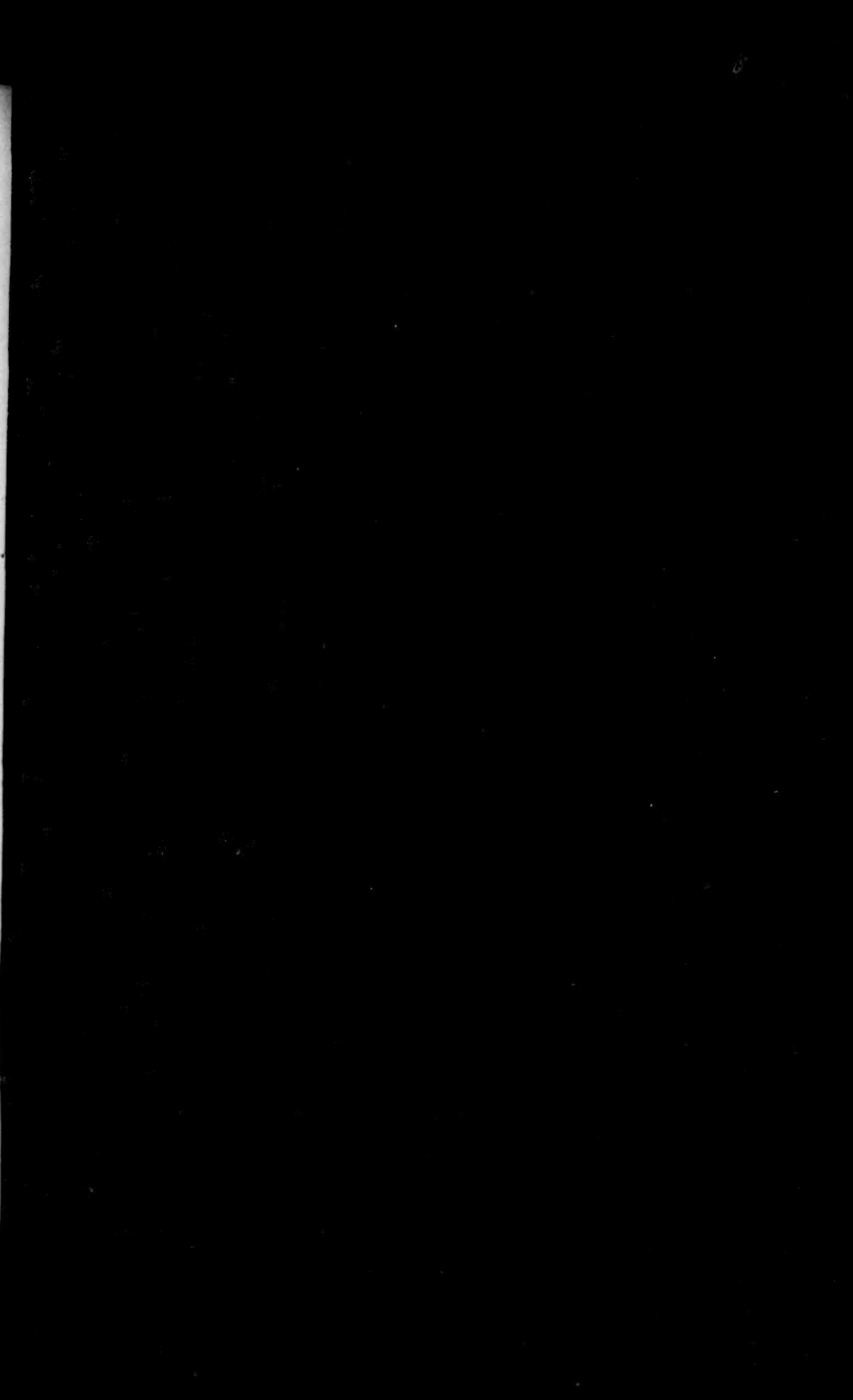
"The officers, non-commissioned officers and soldiers of the Irish Regiment of Berwick, filled with the sentiments of honour and fidelity, which are hereditary among them, entreat Monseigneur to place at the disposal of the King the devotion which they make of their lives in order to support the royal cause, and to employ their arms with confidence on the most perilous occasions."

In reply, the Count de Provence, on behalf of his family, presented the representatives of the Brigades with a farewell memorial banner, on which was embroidered an Irish harp, and was studded with shamrocks and *fleurs-de-lys*; handing it to the Irish officers, the Count then bade them adieu in the following words:—

"Gentlemen, we acknowledge the inappreciable services that France has received from the Irish Brigade in the course of the last hundred years, services that we shall never forget, though under an impossibility of requiting them. Receive this standard as a pledge of our remembrance, and a monument of our admiration, and of our respect; and in future, generous Irishmen, this shall be the motto of your spotless flag:—

'1692—1792,

'Semper et ubique Fidelis.'"



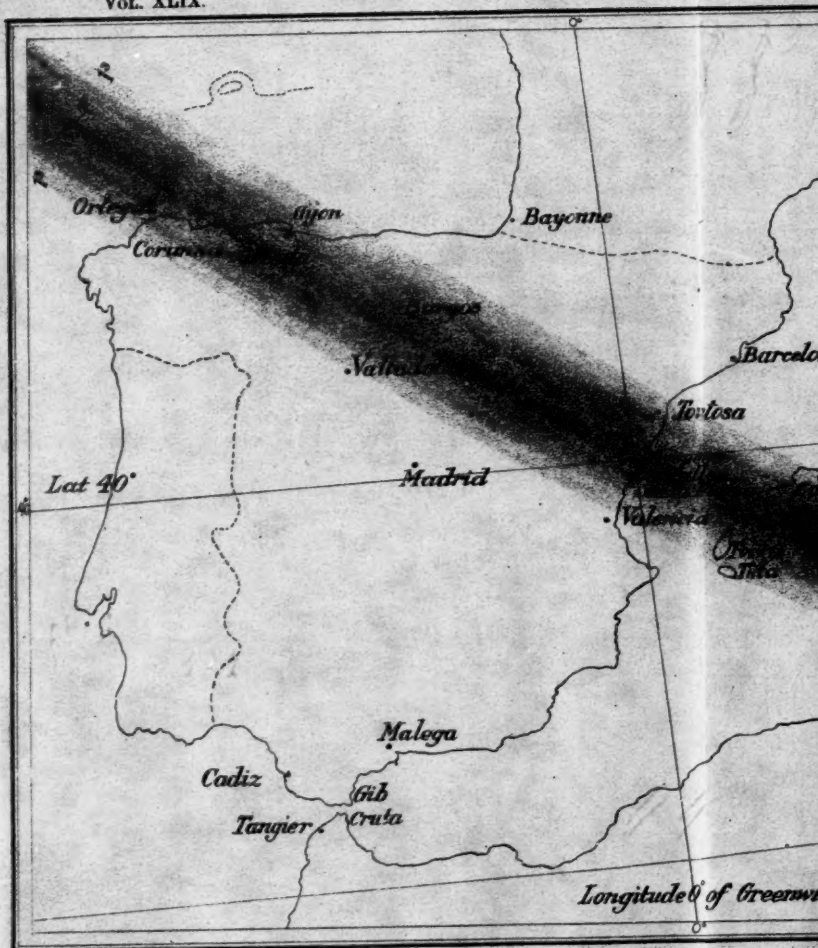
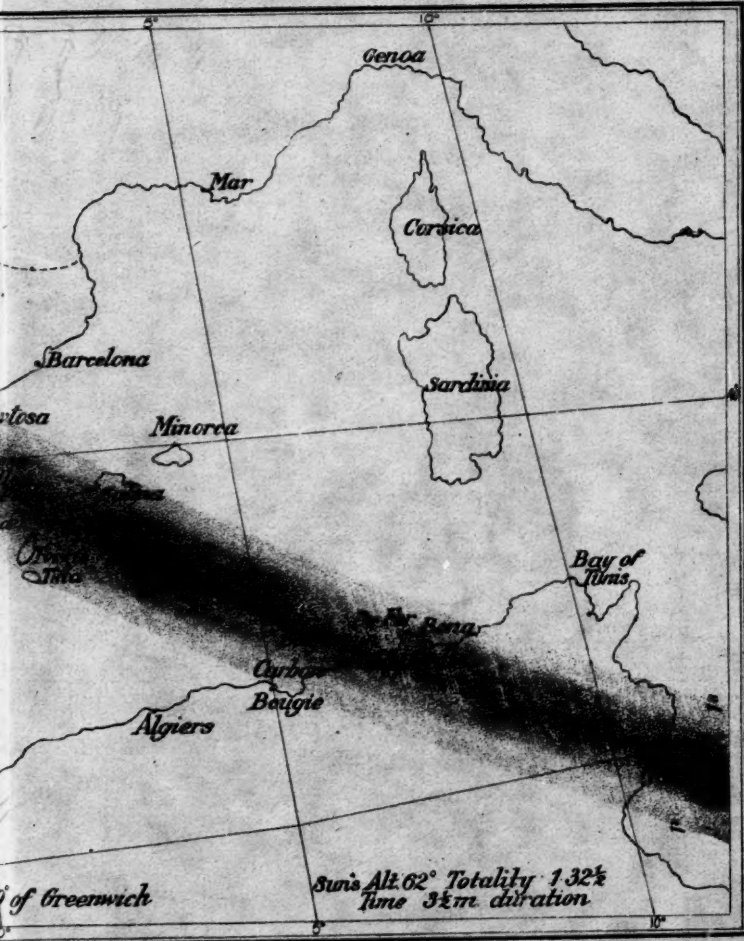


PLATE 4.



ON THE TOTAL ECLIPSE OF THE SUN, 29-30TH AUGUST, 1905.

*By Colonel ALEXANDER BURTON-BROWN, (late) R.A.,
F.R.A.S., etc., etc.*

HAVING recently returned from a cruise to the Mediterranean, where I personally inspected all the most favourable spots for observing the coming total eclipse of the sun on behalf of astronomers and amateurs taking an interest in the science, and communicated my recommendations to the Societies, it was brought to my notice that many officers quartered at Gibraltar, Malta, and in Egypt, besides others who take an August holiday, and those on board H.M. ships or yachting in the Mediterranean might like to have some details before them of the places where the total eclipse may be expected to be seen best, and where the circumstances may be generally favourable for observation. It is in compliance with these wishes that I send you the following notes. With a map of Spain, the Mediterranean, and the North Coast of Africa, showing the path of the moon's shadow and the time and duration of totality, it will be noticed the shadow band is darker at the centre and fades off at the north and south border. It is so sketched to give at a glance a fair idea of totality in any part of the band; the centre line or darkest part is from 3m. 44s. on N.W. of Spain to 3m. 28s. on S.E. of Tripoli, while the north and south edges are only one second.

Besides the places I have referred to, totality should be seen at Labrador, Tunis, and Tripoli, commencing in the former country shortly before seven in the morning, the sun's altitude being 27° , and totality lasting 2m. 38s.; but as these places are rather out of the soldier's beat, I only briefly refer to them. The moon's shadow moves across the Atlantic Ocean at about 4,000 miles an hour, striking the north-west coast of Spain a little south of Lueña, passing in a south-easterly direction south of Oviedo (the port of Gijón being within the shadow), near Pola de Leña, Guarda, Almanza, Castrogeriz, and Celada (near Burgos), Soria, Daroca, Atiaga, and leaving the east coast of Spain near Oropesa and Castellón, thence to the Columbretes Rocks; thence passing nearly midway between two of the Balearic Islands, Mallorca, and Ibiza, and south of Cabrera (south of Mallorca). Crossing the Mediterranean, it continues its course to the north coast of Africa, traversing the headland of Bougaroun, passing near Philippeville, the harbour of Collo (both Bougie and Cape Carbon on the west and Call on the east being within the shadow track) it traverses the north corner of Africa, and, roughly speaking, it passes nearly parallel to the east coast of Tunis and Tripoli, leaving the coast south of Mukhtar about Long. 19° E. and Lat. 30° N. Thence it continues its course across Tripoli and Egypt, passing near Assouan at a station about Long. 32° E. and Lat. 24° N. The duration of totality here is

about 2m. 33s., and sun's altitude 24deg. Totality commencing at, local time, 4h. 33m. 25s. (corresponding to Greenwich mean time, 2h. 21m. 49s., from Assouan the shadow crosses the Red Sea to Arabia, south of Mecca, traverses the south-east of Arabia, the eclipse ceasing at sunset there. The table will show astronomically the best positions for observers the points to be considered are, firstly, the greatest time of totality and the clearest sky. These will be found to be generally in Spain and the north coast of Africa, and any point in the Mediterranean that can be followed by a ship steering from near Oropesa to Bougaroun along the central line.

The places I would advise as most likely to combine a clear sky with good weather are: If on board a ship, between Ortegá Point and Gijón, midway, if possible, on the north coast of Spain; or near the Columbrete Rocks; or midway between Ibiza and Mallorca; or a little south of the Island of Cabrera, and from there along a direct course to the harbour of Collo or Bougaroun Lighthouse.

If on shore, then Oviedo or Pola de Leña, Guarda, Almanza, Castrogeriz, and Celada (near Burgos), Soria, Daroca, Atiaga, Castellar, and Oropesa (reached by morning train from Valencia), or the Columbrete Rocks, the Islands of Ibiza and Cabrera and Mallorca and Philippeville, the harbour of Collo, or Constantine. To those in Egypt, the high ground on east of the Nile, N.E. of Assouan. The fact of the total eclipse commencing between 1 and 1.30 p.m. at the places I mentioned (except Egypt), and the high altitude of the sun, averaging 54 deg., and duration of totality averaging $3\frac{1}{2}$ minutes, renders this eclipse a very exceptional one for both sightseers and those making astronomical observations.

For sightseers a total eclipse of the sun is, in an unclouded sky, the most glorious of all heavenly sights. As the solar disc is gradually worn away (covered) by the moon, till only a faint crescent remains, careful watchers even with the naked eye, better still with a field glass, can see the crescent broken up into fine spots of light (Bailey's Beads), and then, in a moment, the sun disappears and the glorious corona is seen to surround the moon, its streamers of light extending often 2 or 3 solar diameters or more, while not infrequently the red flames of burning hydrogen gas on the sun's limb are clearly discerned, and this lasts during totality. When those few seconds have expired the narrow crescent of the sun is seen on the opposite side of the moon, the corona having disappeared. This crescent grows gradually larger till the sun again appears in its undiminished glory. Observers may also see the shadow sweeping over the ground at over one mile a second, while the general gloom and grey pall that overhangs the earth is only too well known. Those who have a prism or grating spectroscope attached to their field glass can see the (so-called) reversal of the lines in the spectrum as the absorption of the sun's light is replaced by the light of its burning atmosphere (this is only at the moment of commencement and ending of totality). Careful eye sketches of the streamers and other parts of the corona, which amateurs can help in if very carefully made, add also to our knowledge of the sun.

There are doubtless some of our younger members who may have the opportunity of seeing a total eclipse of the sun in England, as one will be visible (weather permitting) in 22 years' time; the central line of totality will pass near Llandudno, in North Wales, and travers-

ing Carnarvon and Flint, Lancashire and Yorkshire; but the length of totality will be short, and considering the uncertain weather in England, it is not an ideal place for observation. It is certain no living person *has* seen one in this country, there having been none visible for over 180 years!

Given favourable weather, which is most likely in August, an opportunity offers this year of seeing one of the most sublime phenomena possible under the most favourable and easy circumstances, which should not be lost to those who value the intelligent and progressive spirit of the age. For astronomers it will be another occasion of learning all that is known about the sun, its constitution, temperature, etc., by spectroscopic, polariscopic, and photographic observations. On my first taking part in an eclipse expedition in 1870, a distinguished Colonel said to me: "Why go to Spain to see the eclipse; why I have seen several here at home." The difference between a partial and total eclipse is not sufficiently known; it is not merely a question of degree. The total eclipse in part of Spain will be seen here in London (weather permitting) *as a partial eclipse*, the greatest phase being about 1h. 4m., when the sun will be partially obscured, having the appearance of a crescent like a moon about 4 days old; but no corona nor streamers will be visible, the superior light of the sun's crescent entirely obliterating them.

The present eclipse will be total in a belt of rather over 150 miles in width, extending from Labrador to Egypt, and in England as a partial eclipse commencing at Greenwich on 30th August at 11.49 a.m.; greatest phase at 1h. 4m., when '214 of the northern crescent of the sun alone will be visible, and it will be over at 2.15 p.m. If the sky is clear a dark glass or several of varying densities will be necessary, and I have found a photographic glass plate fogged or a film where the fogging is greater in some parts than in others a very useful item to look through or use with telescope or field glass. As the crescent gets smaller the less fogged glass is used, whereas for a total eclipse a *faint* moon glass is useful.

STATIONS.

	Names.	Weather.	Temperature.	Sun's Altitude during Totality.	Time.	Duration.	Remarks.
North Spain	Oviedo ...	Fair	Warm	About 56°	h. m. s.	m. s.	{ From Coruña or Gijón.
	Soto de Rey, Pola de Leña, and Mieras ...	Good	Fairly warm	56°	1 2	3 42	
South Spain, from Valencia.	Torreblanca ...	Very good	Hot	55°	1 16½	3 43	{ By morning train from Valencia.
	Castellar ...	Very good	Very hot	55°	1 16½	3 37	
	Oropesa ...	Very good	Very hot	55°	1 17	3 38	
	Columbretes rocks by launch ...	Very good	Warm	54°	1 19	3 39½	
Balearic Islands, from Valencia, Barcelona, or Marseilles.	Ibiza, town of island ...	Fairly good	Warm	53½°	1 23	3 9	{ From Valencia or Mallorca.
	Pta de Serra, N.W. of island ...	Good	Warm	53°	1 22	3 9	
	Mallorca, Palma ...	Fairly good	Hot	52½°	1 27	3 33	
	" Cabrera Isla ...	Good	Warm	51½°	1 29	1 53	
	" Manacor ...	Fair	Hot	51°	1 28	1 53	
	" near Andraix ...	Fairly good	Warm	52°	1 26	3 30	
North Africa, from Marseilles by direct, or from Algiers, or Tunis by train.	Robertville from Philippeville	Good	Very hot	{ 51½°	1 32½	3 35	{ From Philippeville by train.
	Collo Harbour from " Constantine, on railway ...	Good	Hot		1 31	3 31	
	Gullma (on railway) ...	Good	Very hot		1 31½	2 55½	
	Bougaroun from Collo Road	Good	Hot		1 36	3 32	
	Djigelli from Collo boat ...	Excellent	Hot		1 30	3 30	
	Bone from Philippeville steamer ...	Good	Hot		1 29	2 54	
	Cape Carbon from Philippeville via Bougie ...	Good	Hot		1 37	2 41	
	Bougie from Philippeville	Excellent	Hot		1 27	0 44	
	La Calle, local steamer from Bone ...	Good	Hot		1 27	0 41	
	Bone ...	Good	Hot		1 37½	0 22	

NOTE.—Bougaroun headland is about 35 miles west of Philippeville, and the lighthouse about 480 feet above sea level; the heights behind rise to 3,800 feet.

NAVAL NOTES.

HOME.—The following are the principal appointments which have been made: Rear-Admiral G. Neville, M.V.O., to Command of the First Cruiser Squadron. Captains—S. V. De Horsey to "Blake"; G. E. Patey, M.V.O., to "Implacable"; E. F. Inglefield to "Antrim"; W. J. Grogan to "Aboukir"; P. W. Bush, M.V.O., to "New Zealand"; Sir R. K. Arbuthnot, Bart., M.V.O., to "Hampshire"; G. H. Mundy, M.V.O., to "King Alfred"; J. G. Hewitt to "Juno"; E. H. Smith to "Argonaut"; F. C. Noel to "Hood"; C. Burney to "Impregnable"; F. S. Miller to "Hawke"; the Hon. R. F. Boyle, M.V.O., to "Leviathan"; G. P. Hope to "Good Hope."

Vice-Admiral Sir Wilmot H. Fawkes, K.C.V.O., has been selected to succeed Vice-Admiral Sir A. Fanshawe, K.C.B., as Commander-in-Chief on the Australian station.

The first-class battle-ships "Albion"—flying the flag of Rear-Admiral the Hon. A. Curzon-Howe, C.V.O., C.B., C.M.G., recently Second-in-Command in China—"Ocean," "Vengeance," and "Centurion" have been withdrawn from the China station, and are returning home; the "Glory," the flag-ship of the Commander-in-Chief, Sir G. U. Noel, K.C.B., K.C.M.G., is also to return, but it is not yet stated on what ship Sir Gerard Noel is now to hoist his flag.

The first-class battle-ships "Canopus" and "Goliath," which were originally commissioned for the China station, are now to be attached to the Atlantic and Mediterranean Fleets respectively. The new first-class battle-ship "New Zealand" was commissioned on the 24th ult. at Portsmouth with a nucleus crew; she is to proceed later to join the Atlantic Fleet.

The first-class armoured cruiser "Aboukir," recently returned from the Mediterranean, paid off on the 15th ult. at Portsmouth. The second-class cruiser "Juno" arrived at Plymouth on the 18th ult. from the Mediterranean, and paid off at Chatham on the 26th ult., recommissioning the following day for service with the Channel Fleet. The second-class cruiser "Thetis" arrived on the 25th ult. at Sheerness from China.

Manœuvres in the Channel.—Some interesting manœuvres have been carried out since the beginning of the month in the Channel, in which on the one side have been the Channel Fleet, the First and Fourth Cruiser Squadrons, the ships under the command of the Admiral Commanding the Reserves, the permanent destroyer divisions, and the destroyers commissioned as tenders, with the ships attached as tenders to the gunnery and torpedo schools; on the other side have been the three Reserve divisions of battle-ships, cruisers, and destroyers, with about thirty-one torpedo-boats. Details as to the manœuvres are being kept secret, but it is believed that they have consisted of three distinct sets of operations: each of the Reserve divisions having attempted at intervals of forty-eight hours to pass Portland and get to Torbay within twenty-four hours after leaving Portsmouth. On each occasion a division from Portland had to attempt to discover, engage, and destroy the Portsmouth

division before it passed a specified point. Admiral Sir A. K. Wilson, K.C.B., K.C.V.O., was to act as Chief Umpire. It is believed also that the Admiralty wished to test the value of the Reserve divisions, manned only as they are with their nucleus crews, in carrying out manœuvres with a fleet of fully-manned ships, due regard being had to the extra strain thus necessarily thrown upon the officers and men.

The Disaster to Submarine "A8."—Another deplorable disaster to a submarine occurred at Plymouth on the 8th ult., when "A8," while at exercise for instructional purposes off the Breakwater, foundered without giving any warning to her unfortunate crew. The conning-towers were open, when suddenly the bow of the vessel dipped heavily, which caused her to ship a large quantity of water through the conning-tower, and before it was possible to close the conning-tower she went down. Lieutenant Candy (the Commander), Sub-Lieutenant Murdoch, and two petty officers, who were on deck at the time, were saved; but Sub-Lieutenant Fletcher and nine of the crew, who were below, were all drowned. Steps were immediately taken to raise the vessel, which was successfully accomplished on the morning of the 12th ult. The finding of the Court-martial which was held on the survivors was as follows:—

"The Court finds that submarine "A8" was lost outside Plymouth Breakwater, about 10.30 a.m. on the 8th June, through foundering from water getting in through the open conning-tower when running at ten knots speed with a buoyancy at starting of six tons and trimmed four degrees by the stern, which buoyancy and trim appeared to have altered from some unexplained cause, such as the movement of weights forward, possibly admission of water or free water. There is no evidence to show which way the diving rudders were put, although repeated orders were given to put them up. They may, however, have been put inadvertently the opposite way to that actually intended. Water having once commenced to get into the conning-tower and running forward, she could not recover herself, although the helm was finally found hard up.

The Court regrets that the officer in command did not stop the engines sooner when he realised that his repeated orders to put the diving rudders up had no effect, although expert evidence shows there was no reason to anticipate danger in running the boat trimmed as at starting, as it appears to have been considered impossible for her to dive under these conditions. The Court, therefore, acquits Lieutenant Algernon Hugh Chester Candy and the other survivors of submarine "A8" of all blame for the loss of that vessel."

The accident to "A8" is the third to British submarines, which has been attended with fatal results. In March of last year, "A1" was run down at Spithead, with a loss of eleven lives. In February of this year there was an explosion of petrol vapour on board "A5" at Queenstown, by which four men met their death.

A serious accident occurred on board the "Magnificent" on the 14th ult., when at target practice off Tetuan, on the Moorish coast, by which Lieutenant Stobart, R.N., and four men lost their lives, and two officers and ten other men were more or less injured. It appears there was a miss-fire in one of the 6-inch guns; the breech of the gun was opened to ascertain the cause, when the cartridge exploded, igniting two others in the casemate, more or less injuring everyone in the casemate.

Steam Trials.—The "Skirmisher," one of the eight scouts ordered about two years ago, has just completed most successfully her steam and other trials, and will now be prepared for commission. Four firms were entrusted with orders for two vessels each, and the "Skirmisher" is the second of the vessels designed, built, engined, armed, and completed for service by Messrs. Vickers, Sons, and Maxim (Limited), at their naval construction works at Barrow-in-Furness. They are the first of the firms to complete both of their scouts, the other, the "Sentinel," being already in commission, and as a happy coincidence she was lying in the Clyde, where she had arrived in the progress of a cruise, when the "Skirmisher" anchored there at the termination of her full-speed trial of eight hours' duration. On this run, with a load of coal on board sufficient to enable the vessel to steam 1,500 miles at 12 knots, the "Skirmisher" averaged a speed of 25·2 knots, with the twin engines indicating collectively 16,899-I.H.P. The guaranteed speed was 25 knots with 17,000-H.P. The "Sentinel" attained an equally favourable result on her trials four months ago. This speed was measured by the average number of revolutions required on six runs over the measured mile at Skelmorlie, on the Clyde—the most accurate basis. The machinery worked most satisfactorily, and the boilers, of the Vickers express type, steamed easily. The mean pressure at the boilers was 253 lbs. per square inch, and at the engines 239 lbs. The starboard engine, making 201·5 revolutions, gave 8,581-H.P., and the port engine for 201·6 revolutions, 8,432-H.P. The coal consumption on this full-power trial was low, as was also the case on the 96 hours' test at cruising speed. For 904-I.H.P. the vessel maintained a speed of 10·6 knots, and the coal burned worked out at the rate of one ton for each 10·29 nautical miles steamed—a most favourable result. The "Sentinel" and "Skirmisher" are 360 feet long and 40 feet beam, and when at 14 feet 3 inches draught they displace 2,940 tons. They have proved good sea-boats. The trials were carried out within a specially short period.

Want of space has prevented our giving earlier the result of the trials of H.M.S. "Sapphire," now flying the flag of Rear-Admiral Winsloe, Commanding the Torpedo and Submarine Flotillas. The vessel had three trials, namely, the thirty hours' trial at 4,900-I.H.P. and 18 knots, the eight hours' trial at 7,000-I.H.P. and 20 knots, and the full-power trial of 9,800-I.H.P. and 21½ knots, and the results in every case were very successful, the machinery working well throughout. On the thirty hours' trial, the average I.H.P. was 5,012, with a speed of 18·47 knots; on the eight hours' trial, the I.H.P. developed was 7,281, with 20·6 knots as an average; and on the full-power trial the speed was 22·43 knots, for 10,200-I.H.P.

Launches.—The new first-class battle-ship "Hibernia" was launched on Saturday, the 17th ult., at Devonport.

The "Hibernia" is the last ship of the "King Edward VII." class to be launched, a sister-ship, the "Africa," having taken the water on the 20th May at Chatham. Her first keel-plate was laid down on the 6th January, 1902, and the ship has therefore been eighteen months under construction, during which some 6,500 tons of material have been built into her. The class was designed by Sir William White, though several modifications have been introduced by Mr. Philip Watts. The principal dimensions are:—Length between perpendiculars, 425 feet; length over all, about 454 feet; beam, extreme, 78 feet; displacement, 16,350 tons; mean draught, 26½ feet.

The armament consists of the following guns: — Four 12-inch 50-ton 40-calibre guns in barbettes forward and aft; four 9-2-inch guns in barbettes on upper deck; ten 6-inch Q.F. 50-calibre guns of latest design in an armoured battery on the main deck; twelve 12-pounder 18-cwt. guns on upper and shelter decks; two 12-pounder 8-cwt. guns on shelter deck for boat and field service; fourteen 3-pounder guns, three of which are also for boat service; two 303-inch Maxims, which are also intended for boat or field service. In addition there are four submerged torpedo-tubes, for which eighteen 18-inch torpedoes will be carried, besides six 14-inch torpedoes for the boats.

Protection is afforded by an armoured belt of Krupp steel, varying in thickness from a maximum of 9 inches amidships to 4 inches forward, and about 14 feet in width, extending to about 5½ feet below the water-line, while at after end of belt is a rounded bulk-head of 12- and 8-inch steel. The battery for the 6-inch guns will be protected by 7-inch armour, the guns being isolated by protective screens 2 inches in thickness. The barbettes for the 12-inch and 9-2-inch guns will be protected by armour varying in thickness from 12 inches to 6 inches, and the 12-inch guns are further protected by 10-inch to 8-inch shields. There is a protective deck of the usual turtle-back shape, varying from 2½-inch to ¾-inch in thickness, and, in addition, the upper deck amidships and the main deck forward are of 1-inch steel. The armoured conning-tower forward is of 12- and 10-inch steel, and the director tower aft is of 5-inch steel, and armoured hoists provided where necessary for the supply of ammunition to the guns. The stem, stern-post, shaft brackets, and rudder are large steel castings, the first-named, which forms the ram, weighing about 23½ tons.

The ship will be propelled by twin screws, worked by independent sets of vertical triple-expansion engines, each with one high-pressure, one intermediate, and two low-pressure cylinders, of the collective power of 9,000 horses, giving an aggregate indicated power for both engines of 18,000-H.P., the boilers being loaded to 210 lbs. per square inch, the steam being reduced to a pressure of 205 lbs. per square inch at the engines. With this power, a speed of about 18½ knots is anticipated. The boilers are of two types, there being 3 cylindrical and 18 water-tube of the Babcock and Wilcox type. The former are arranged in one boiler-room, and the latter in three boiler-rooms. The amount of coal carried at the normal draught is 950 tons, but her full stowage capacity is 2,200 tons, which will give her a steaming radius of 20 days at 10 knots, or 4½ days at full speed.

There will be two masts, fitted with platforms to take instruments for range-finding and control of fire of the 6-inch and larger guns, and also for the search-lights. The mainmast will be fitted with a steel derrick capable of lifting the heaviest boats (about 18 tons), and will also carry the Temperley transporter for coaling purposes. The boats include two 56-foot steam pinnaces, a 40-foot steam barge, and sailing-boats ranging from a 42-foot launch to a 16-foot dinghy. The two steam pinnaces are each capable of steaming about 13½ knots, and are fitted with torpedo-dropping gear. The hoists on the main derrick, the 12-inch and 9½-inch guns, and their ammunition hoists will be worked by hydraulic power. The ventilation of every part of the ship will be carried out by means of numerous motor-fans, and for living spaces a system of ventilation has been adopted by which heated fresh air will be supplied. It is intended to utilise the wash-places as cock-pits when in action, and in order to facilitate the transport of the wounded, a lift from the upper to the middle decks will be fitted in one of the large hatch-ways.

The electrical arrangements will be most complete, the generating plant consisting of four dynamos capable of supplying 600 ampères at 105 volts when running at 400 revolutions per minute. In addition to lighting every part of the ship, electrical power is to be utilised for driving the numerous fans for the ventilation of the ship, as well as for motors for ammunition hoist winches, coal hoist winches, and the after capstan. An efficient system of lighting throughout by means of Colomb's lamps is also arranged for, for use when the electric light is not available. A complete installation of electric bells, voice pipes, and navyphones will be fitted for communication between conning tower, engine rooms, and gun positions. The complement, when the vessel is ready for sea, will be composed of 778 officers and men if not a flag-ship, and of about 810 if carrying an admiral and his staff. The whole of the bulkhead and citadel armour has been delivered at the yard, and 975 tons of the armour is already in place, so that if no delay occurs with the supply of the remaining armour, guns and mountings, machinery, etc., the vessel will be completed some months before the date originally intended.

Two of the new first-class armoured cruisers have also been launched, viz., the "Cochrane," on the 20th May, from the Fairfield Shipbuilding Company's yard at Govan-on-Clyde, and the "Achilles" on the 17th ult., from the Elswick yard, Newcastle-on-Tyne. Both vessels are sister-ships of the "Duke of Edinburgh" class, but are some 1,000 tons less displacement than the new cruisers of the "Minotaur" class. Their dimensions are as follows:—Length, 480 feet; beam, 73 feet 6 inches; displacement, 13,660 tons, with a draught of 27 feet. The armament will consist of six 9·2-inch guns in hooded barbettes, protected by 6-inch armour, one forward and one aft, and one on upper deck at each corner of casemate; four 7·5-inch Q.F. guns in 6-inch armoured casemate, with two 12-pounder Q.F., twenty-four 3-pounder Q.F. guns, two Maxims, and three submerged torpedo-tubes. The armour belt is 6-inch, tapering to 3-inch at the extremities. The engines are to develop 23,500-I.H.P., to give a speed of 23 knots, steam being generated by 19 Yarrow water-tube boilers and 6 single-ended cylindrical ones, all the boilers being designed to work at a pressure of 210 lbs.

FRANCE.—The following are the principal appointments which have been made: Vice-Admirals—F. E. Fournier to Command of Manœuvre Fleet; E. M. Richard to Command of Squadron in the Far East. Rear-Admirals—P. Germinet to Command of Reserve Division of Mediterranean Fleet; M. Kiesel to be Chief of Staff to Vice-Admiral Richard; L. H. Thomas to be Chief of the Staff at Brest. Capitaines de Vaisseau—E. E. Nicol to "Foudre"; L. H. Dufaure de Lajarte to "Jules Ferry"; C. L. Chocheprat to be Chief of Staff to Vice-Admiral Fournier. Capitaines de Frégate—L. F. Bertaud to "Pistolet"; F. G. Pigeon de Saint-Pair to "Dunois" and Command of 3rd torpedo flotilla in the Mediterranean; C. T. Charlier to be Chief of Staff to Rear-Admiral Germinet.—*Journal Officiel de la République Française*.

The new members of the Superior Council of the Navy are Vice-Admirals Besson, Péphau, Melchior, Marquis, and Gigon (the five Maritime Prefects); Caillard and Gourdon, the Commanders-in-Chief of the Channel and Mediterranean Squadrons, respectively; Maigret, Fournier, and Touchard, Chief of the General Staff of the Navy.

The Minister of Marine, on the advice of the Superior Council of the Navy, has requested permission of Parliament to substitute eight destroyers for the twenty torpedo-boats already sanctioned, and which were to have been laid down in conformity with the Appendix of New Constructions of the Budget of 1905. In the opinion of the *Temps*, this step on the part of the Minister is wise, as while France is particularly strong in torpedo-boats, she is very weak in destroyers, even as compared to Germany.

The Manœuvres.—Vice-Admiral Fournier hoisted his flag in command of the Manœuvre Fleet on the 3rd inst., on board the "Brennus" at Toulon.

The following ships of the Division of the Reserve were completed to full effectives for the manœuvres on the 2nd inst. at Toulon:—

First-class battle-ships — "Brennus," "Hoche," "Charles Martel."

Destroyers—"La Hire," "Rapière."

The three coast-defence battle-ships "Requin," "Indomptable," "Caïman"; the three armoured cruisers "Bruix," "Charner," "Pothuau," and the protected cruiser "Cassard," all in Reserve at Toulon, were also commissioned with reduced complements, as for trials, on the 3rd inst., at Toulon, for the manœuvres. The two divisions of the first line of the first torpedo flotilla of the Mediterranean, with the disposable submarines, have also been mobilised.

The Manœuvre Fleet has been constituted as follows:—

First-class battle-ships.—"Brennus" (flag-ship of Vice-Admiral Fournier, Commanding-in-Chief).

MEDITERRANEAN ACTIVE FLEET.

First Division.

First-class battle-ships.—"Suffren" (flag-ship of Vice-Admiral Gourdon, Commander-in-Chief), "Gaulois," "Charlemagne."

Second Division.

First-class battle-ships.—"Iéna" (flag-ship of Rear-Admiral Barnaud), "Saint Louis," "Bouvet."

Light Division.

First-class armoured cruisers.—"Marseillaise" (flag-ship of Rear-Admiral Campion), "Desaix," "Kléber."

Protected cruisers.—"Du Chayla," "Linois," "Galilée."

Destroyers.—"Arc," "Arbalète," "Mousqueton," "Dard," "Carabine," "Sarbacane."

Reserve Division.

First-class battle-ships.—"Charles Martel" (flag-ship of Rear-Admiral Jauréguiberry), "Hoche."

Destroyers.—"La Hire," "Rapière."

Coast-Defence Division.

Coast-defence battle-ships.—"Requin," "Indomptable," "Caïman."

Light Division.

First-class armoured cruisers.—"Pothuau," "Charner," "Bruix."

Protected cruiser.—"Cassard."

This Division will be under the command of Capitaine de Vaisseau Lecuve, with his senior officers' pennant in the "Pothuau," while the

Coast-defence Division will be under the command of Capitaine de Vaisseau Duroch, with his pennant in the "Requin." The "Rapière" is to be attached to the "Brennus" as despatch vessel for the Commander-in-Chief.

The Stranding of the "Sully."—No further progress seems to have been made in floating the "Sully," but the following details of her grounding may be of interest:—

"On 7th February the "Sully" got under way at 11.30 a.m. from her anchorage in Aloing Bay, Tonkin, for torpedo practice, and at 2.50 p.m., when in the Henriette Channel, steaming at 10 knots, the captain, being on the bridge, a series of shocks were felt; the vessel gave a bound and then brought up, and it was found she had struck on a sunken rock not marked on the charts, but said to be known to the pilots.

"In a few minutes the water rose, pouring into the ship through large rents in the bottom, and the fore part settled down, the battery being flooded. Immediate steps were taken to save the crew, and all boats were got out, the men being landed on neighbouring rocks, while one boat was sent to the anchorage off Surprise Island, where the 'Gueydon' and 'D'Assas' were lying. They were also immediately communicated with by wireless telegraphy, the apparatus on board the 'D'Assas' duly recording a telegram from the 'Sully' stating she was sinking and in want of immediate assistance, the three last words being indefinitely repeated. It was at first thought to be some signal exercise, and the captain of the 'D'Assas' awaited any order he might receive from the 'Gueydon,' his senior officer. It happened, however, that the apparatus in the 'Gueydon' was not working, and the captain of the 'D'Assas' at last decided to show the telegram to Captain Ridoux, of the 'Gueydon.' Orders were at once given to get under way and proceed at full speed, and the disaster was soon after confirmed, as some of the 'Sully's' boats full of men were picked up. Search for other boats and for the men on the rocks was then made, the object being at first to save life, and it was not till 10 p.m. that, on the 'Sully's' crew being mustered, it was found that all had been happily rescued. The officers saved all their effects, their cabins being situated in the after part, but the men were not so fortunate, all their clothing bags being wet through, and the petty officers' chests not recovered.

"The position of the 'Sully' remains as follows:—The fore part is submerged up to the turret, and she is inclined to port, the water-line on that side being 6 feet under water; she is hung amidships on two pinnacles of rock of unequal heights, and there has been a fear that she might slip off and founder in deep water; the plating of the decks also showed signs of giving way, and it was feared she might break in two. Lighters were obtained from Hong-Kong, and the vessel cleared of her light armament and stores. The captain of the 'Sully,' it is said, committed a grave imprudence in passing so close to the group of rocks which form the west side of the channel, as the directions say these rocks should never be passed within a distance of 120 yards. It is, however, the *Temps* remarks, too early to form an opinion on this point, and the proceedings of the Court of Enquiry have not yet been made public. There is, however, no doubt that Captain Guiberteau, who was appointed by M. Pelletan at short notice to succeed Captain Forret, was an officer of not much experience; he had only been three months a capitaine de vaisseau, and had not previously held a command, his last appointment as capitaine

de frégate having been as naval commandant at Senegal, where he hoisted his pennant on board a water-tank."

The latest accounts from the wreck seem to hold out little hopes of her salvage, and it is feared she must now be considered a total loss—a very serious one for the French Navy, as the 'Sully' cost 30,000,000 francs (£1,200,000), and was considered the finest vessel in the Far East Squadron."

Armoured Destroyers.—Although only fifteen destroyers will be commenced this year, seven being laid down in the dockyards and eight being built by contract, this is a much larger number than has been commenced in one year for some time; moreover, 1905 will mark a very interesting new departure in the construction of these small vessels.

The disadvantages which attach to our present 330-ton type of destroyers are the loss of speed in a heavy sea and their vulnerability, especially as far as their engines and boilers are concerned, which are the life and soul of the vessel, as the smallest projectile is capable of inflicting serious damage.

It is clear that if any effective protection can be devised, it will be of great value, and a trial in this direction is to be made in our Navy. Two of the new destroyers will have armour over the engines, boilers, and most vital parts of the vessel, the thickness of which has not yet been settled, but will probably be of 2-inch hard steel. This will render the destroyer invulnerable to 47-mm. and 57-mm. projectiles, no matter at what distance they may be fired, and impervious to 76-mm. projectiles at ranges over 2,500 and 3,000 yards. This light armour, however, will necessitate an increase in displacement, which will be raised to 450 or 470 tons; still, this will be less than the displacement of the new English destroyers. But it will also entail a loss of speed, which will be only 25 knots; but it is hoped they will be able to maintain this speed in a moderate sea.

The Discussion on the Naval Estimates.—In the discussion in the Senate on the Naval Estimates, M. d'Estournelles de Constant raised the question, in view of the growing burden of armaments, as to whether it was not possible to reduce expenditure, and at the same time secure the safety of the French Colonial possessions by establishing *Ententes Cordiales* with other Powers, and he asked why France should not take the initiative. Vice-Admiral de Cuverville, an officer of experience, who had commanded both the Northern and Mediterranean Squadrons, in replying, pointed out in measured terms that illusions fostered by an ardent desire for peace often led a country into a dangerous position. "Events in the Far East," said the Admiral, "show the danger run by those who, confident in peace, do not keep themselves in a state ready for war. We have a striking proof in the fact that the young Sovereign of the allied and friendly nation, one of the most peaceful in Europe, who called together the Hague Conference, is at the present time engaged, in spite of himself, in a war, the consequence of which no one can as yet estimate." Continuing, the Admiral proceeded to lay stress upon the necessity of having naval manœuvres, as they were the only school in which officers and men could learn their duties in war; and he pointed out the serious results to the Russian fleet in Port Arthur from the want of such training. He then laid stress on the lessons to be drawn from the naval operations in the Far East, and while admitting the necessity of some flotillas of small vessels for coast

defence, it was impossible for such vessels to take the place of large sea-going ships, to which they could only serve as auxiliaries, when acting at any distance from their base of operations; and he laid stress on the necessity of battle-ships being included in the new programme, which must be brought forward, the battle-ships being the fighting units, which alone constitutes the naval power of a country, although other classes of vessels have each their own special duties.

M. Thomson, the Minister of Marine, who followed, agreed entirely with Vice-Admiral de Cuverville, as to the necessity of the country being prepared for war and of possessing a powerful fleet, and he proceeded to show that the French fleet, if not absolutely falling behind, was at least stationary, while other Powers were displaying a feverish activity in developing theirs, with a view of wresting from France the position she had so long held. In the period between 1905-1908 the increase of the French fleet would represent only 11 per cent., while that of Germany was to be 21, of the United States 41, and of Italy 15, while the relative value from the point of view of the number of battle-ships of Germany and the United States, in comparison with France, which in 1905 is 72 for the first and 60 for the second, will in 1908 have risen to 78 for Germany and 76 for the United States; moreover, although the displacement of French battle-ships compared favourably with those of Germany, it was much below that of the English and U.S. ships, and unquestionably a heavy displacement meant a more powerful ship, both for offence and defence. In a word, according to the Minister, in numbers the French Navy was still superior to other Powers except England, but this numerical superiority was rapidly disappearing; while in tonnage it was inferior, and the *matériel* was less powerful and less modern.

Continuing, M. Thomson declared, that while it was not necessary to make a new effort, they must continue the programme which had its birth in 1900, and it was further necessary to build ships to take the place of those now growing obsolete. The whole pith of the question was, whether the Chambers were willing that France should abdicate the position as a naval Power, which she had occupied for so long. It was not a matter of maritime domination, nor of exercising the empire of the sea; it was purely and simply a question of the maintenance of peace, and one of the best means for guaranteeing peace is that France should possess an adequate fleet—such a fleet as the country can maintain without too great a strain on the financial resources of the country. The question was continually being asked, why the country, having already been called upon to make a great effort in 1900 for the fleet, should be expected to continue it. The reply to this is, that ships have not a very long life, and if the fleet is really to remain efficient, it is absolutely necessary to replace the units as they become obsolete.—*Le Temps, Le Moniteur de la Flotte, and Le Yacht.*

UNITED STATES.—*The New 14,500-Ton Cruisers.*—General plans for the two new 14,500-ton cruisers, "North Carolina" and "Montana," for the United States Navy may be examined at the Navy Department, Washington.

The maximum time allowed for completion will be limited to forty-two months with the usual penalties for delay.

On her speed trial the vessel must make an average of 22 knots, with a deduction in price for less speed.

The general dimensions and features of the vessels are as follows:—Length on load water-line 502 feet; beam, extreme, at load water-line, 72 feet 10½ inches; displacement on trial, not more than 14,500 tons; mean draught to bottom of keel at trial displacement not to exceed 25 feet; total coal bunker capacity, about 2,000 tons; coal carried on trial, 900 tons; feed water carried on trial, 66 tons. The hulls are to be of steel throughout, in accordance with the "Specifications for the Inspection of Hull Material," and the armament will be as follows:—

Main battery: Four 10-inch Q.F. rifles; sixteen 6-inch Q.F. rifles; twenty-two 3-inch Q.F. guns; four submerged torpedo-tubes.

Secondary battery: Twelve 3-pounder semi-automatic Q.F. guns; four 1-pounder semi-automatic guns; two 30-calibre machine guns; two 30-calibre automatic guns; two 3-inch field guns.

The hull will be protected by a water-line belt of armour worked in vertical strakes amidships, where it will be about 18 feet in height, extending from the protective deck to the gun deck port sills, being stepped down at the ends; to be of a uniform thickness of 5 inches throughout the machinery and magazine space and 3 inches forward and abaft this. The upper side armour will be disposed in wake of the 6-inch battery, and will extend from the gun deck port sills to the main or upper deck, and will be 5 inches thick throughout. Nickel steel 2 inches thick will be disposed in wake of the 3-inch battery.

Athwartship armour of 6-inch uniform thickness will be fitted from the protective to the gun deck; also 5-inch armour in same location from the gun to the main deck. The upper and lower athwartship armour to extend from the shell plating to the 10-inch barbettes.

The 10-inch barbettes will extend from the protective deck to about 5 feet above the main deck, and will consist of 8-inch armour in front and 4-inch at the rear above the protective deck. The 10-inch turrets will have a front plate 9 inches thick, rear plate 5 inches thick, side plates 7 inches thick, and top plates 2½ inches thick. The conning tower will be 9 inches thick, and will have a door 6 inches thick. Signal tower to be 5 inches thick. An armour tube 36 inches in diameter will extend from the base of the conning tower to the protective deck, and be 5 inches thick throughout. Teak backing of a minimum thickness of 3 inches will be fitted behind all side armour, and 2 inches thick behind 10-inch turret armour; other armour will be fitted without backing.

There is a complete protective deck extending from stem to stern, the deck being flat amidship, but sloped at the sides throughout, and also at each end. It will be built up of 20-lb. lower plating throughout, with nickel steel of 140 lbs. on slopes and 40 lbs. on the flat, except over the magazines, where it will be 60 lbs. forward and abaft 10-inch barbettes.

There are many other interesting details in connection with the cruiser, which are included in the description. These relate to the nickel steel protection, ammunition supply, and magazines, propelling machinery, machine tools, electric generating plant, ventilation, coaling arrangements, boats, water systems, plumbing, etc.

Each vessel will be equipped with two steel military masts, and arranged for wireless telegraphy. The vessels are also designed as flag-ships, and will provide ample accommodation for the flag officer, a commanding officer, a chief of staff, nineteen wardroom officers, ten junior officers, eight warrant officers, and not less than 816 men, including marines.—*U.S. Army and Navy Journal*,

Report of the Committee Appointed to Consider the Respective Value of Coal and Oil Fuel.—In view of the cost incurred and the labour involved in conducting these experiments the manufacturing as well as the maritime world will be most interested in noting the practical conclusions reached. It is hoped that the engineering profession will find much interest in and attach proportionate value to the data collected.

As a result of the extended series of tests the following conclusions have been drawn :—

1. That no difficulty should be experienced by an intelligent fire-room force in burning oil in a uniform manner. It need likewise require but little experience upon the part of skilled water tenders to be able to detect, either from the character of the roar or hissing noise, or by the colour of the flame at different points, an approximate idea, both as to evaporative output and efficiency conditions.

2. For general purposes on shore, high-pressure steam is a more satisfactory spraying medium than air. The use of steam however, as an atomising agent for naval purposes will undoubtedly require a considerable increase in the size of the evaporating plant, and this must be considered of importance. The necessary increase of the evaporating plant is practically the main objection to the employment of steam, as the spraying medium for liquid fuel on board naval and merchant vessels.

3. While the use of steam as a spraying medium will undoubtedly prove most satisfactory for general purposes, the results of the tests show that the consumption of fuel oil cannot be forced to as great an extent with steam as the atomising agent as when highly heated compressed air is used for this purpose. As the war-ship is designed to be operated at short notice under the severest forced-draught conditions, the question will have to be considered, whether it is not more advisable to fit air burners that would be found most efficient for the day of battle, rather than effect an installation of steam burners that are most desirable for general cruising. The advantages of air as the best spraying medium for severe forced-draught conditions, is due to the fact that this atomising agent, after entering the furnace, is a supporter of combustion. With the use of steam as the atomising agent the rarefied vapour simply displaces a certain portion of air that is requisite for complete combustion. If it were not for the fact that air compressors necessary for supplying an atomising agent are very bulky and heavy, and require considerable room for their installation, the question might be considered, whether for war-ship purposes it would not be advantageous to effect an installation whereby either air or steam could be used at will.

4. That in every oil-fuel installation special provision should be made for the removal of the water that will collect from various sources at the bottom of the supply tanks. Even a small amount of water pumped to the burners will interfere with the efficient and satisfactory work of an oil-fuel installation. As it is essential with every boiler plant to secure a uniform if not large output, the annoyance and evil of occasionally pumping water rather than oil to the burners cannot be over-estimated.

5. That the evaporative efficiency of crude and refined oil is practically the same, no matter from what locality the oil may come. The danger of using crude oil, however, is much greater. As it should not be an expensive matter to build refineries near one of the terminal points of a pipe line, the expense of such refining should not increase to a perceptible degree the cost of such fuel, since the sale of the by-products of crude oil would often pay in great part the expense of distillation.

6. The great benefit of heating the air necessary for effecting combustion cannot be doubted.

7. In order to provide a uniform supply of oil to the burners the oil should be heated by some simple means. It can be expected that the burners will be operated much more satisfactorily when oil is thus heated. It being understood that the heating has been carried only to a point well below the temperature of the deposition of the hydrocarbons.

8. Where the use of a liquid-fuel installation is projected, there should be a reserve of burners installed, and these burners should be of a design that would permit rapid examination, thorough overhauling, and easy renewal of special parts by the fireroom force. Careful experiment as well as extended experience have shown that by increasing the number of burners there is not only a more uniform but a more efficient distribution of flame. There is also a minimising of the blowpipe effect, as well as a marked reduction in the amount of noise in the furnace.

9. That the hygrometric state of the atmosphere has a noticeable influence upon the efficiency and capacity output of boilers.

10. In order to secure in oil-fuel installations more uniformity of conditions in the furnace, and to decrease the noise where air is used as a spraying medium, an air-cushion tank for the oil-supply pump should be installed. Such a tank would break the pulsations of the pump and serve a similar purpose as the regulating air chamber of an ordinary feed pump.

11. In view of the liability of every form of burner to clog, the necessity of making special provision for straining the oil was emphatically shown. It would be extremely advisable to install a strainer both on the suction and discharge pipes of the oil-feed supply. These strainers should be of a design that would permit rapid examination and renewal, and one patterned after the Macomb type would meet all general requirements.

12. Extended experience in the burning of crude oil will confirm the opinion that the simpler the furnace the greater its efficiency. The erection of brick arches only tends, in many cases, to reduce the volume of space necessary for effecting complete combustion. In Scotch boilers there should be a simple verticle brick lining of the back combustion-chamber wall and a lining of the front end of furnace for about a third of its length.

13. That no design of oil-fuel installation should be permitted for marine purposes which would not permit the renewal within twenty-four hours of all grate and bearing bars, so that a return to coal could be accomplished within a reasonable time in case of failure of oil supply.

14. Where oil is used as a fuel in a Scotch boiler the introduction of retarders in the tubes will undoubtedly increase the evaporative efficiency of the boilers. The use of retarders will prove beneficial by reason of the fact that such devices not only prevent the heated products of combustion from passing too freely through the tubes, but likewise cause a more uniform distribution of these gases in their passage through the tubes to the base of the stack. In thus causing a more uniform and effective heating of the tubes the liability of the end of the tube to be burned is undoubtedly diminished. With oil as a fuel but little soot forms on the heating surfaces of the tubes. Where retarders are not used in large tubes in an oil-fuel installation it is reasonable to presume that a certain portion of the gases of combustion reaches the smoke-stack without coming into contact with any of the boiler surfaces. Where coal, however, is used as a fuel in a Scotch boiler, the resulting coating

of the tubes by soot generally reduces their sectional area to a degree sufficient to materially impede the flow of the gases of combustion, and therefore, under such conditions the gases reach the base of the stack at a comparatively low temperature. Where oil is properly burned it can be regarded as a fact that the velocity of the flow of the gases is greater than where coal is used, and therefore retarders should be used in the case of fire-tube boilers, and increased baffling in the case of water-tube boilers.

15. An important point established has been that the calorimeter openings of water-tube boilers should be less than in the case of the Scotch boiler, whether oil or coal be used as a fuel.

16. That marine firemen are not ill-disposed toward the use of oil. It will be essential, however, particularly for marine work, to secure intelligent men for the operation of the burners. It will be found that resulting financial economy will ensue by intrusting the management of oil-fuel installations to men of skill and judgment. Cheap labour cannot be employed in this work; there will be resulting damage, annoyance, and danger if the operation of oil-fuel burners is assigned to unskilled labour.

17. That the efficiency of oil plants will be primarily dependent upon the character of the installation of fittings and auxiliaries. The form of the burner, so long as it is manufactured in accordance with general well-known principles and all its parts are accessible for overhauling, will play a very small part in extending the use of crude petroleum. The method and character of the installation, however, are all important, and therefore the work of designing and constructing such a plant should only be intrusted to those who have given careful study to the matter and who have had extended practical experience in burning the crude product. Consumers should take special care that they neither purchase appliances that have been untried nor permit the installation to be effected by persons who have had but limited experience in such work.

18. Where crude petroleum has undergone a light refining or distillation no ill effects result to modern steel boilers. From the standpoint of endurance of the boiler the advantage, if any, is with oil. Crude oil, however, by reason of its searching and corrosive effects, has a greater tendency than refined oil to attack the seams and tubes of modern boilers. For marine work, therefore, no crude petroleum should be used, and particularly for ships making long voyages, the fuel oil should undergo some mild distillation before being placed in the tanks.

19. That in the stowing of liquid fuel on board vessels, whether taken on board for fuel purposes or for transportation in bulk, the compartments containing the crude product should be as few as possible, both for reasons of safety and for facility of delivery and discharge.

20. That with the use of oil the forcing of a marine boiler should be much more readily accomplished than with the use of coal.

21. That under severe forced-draught conditions and with water-tube boilers, and with the use of oil as a fuel the solution of the smoke question is nearly as remote as ever. Where a limited quantity of oil is burned in a Scotch boiler, however, and retarders are used in the tubes, the burning crude petroleum should be smokeless.

22. The value and necessity of installing a series of draught gauges between the ash pan and the base of the stack were conclusively shown. As a result of the study of the draught conditions at different points there were changes made in baffling the gases which were of decided benefit. It is therefore recommended that for experimental purposes a series of

draught gauges be fitted to the boilers of several large ships, since the board is of the opinion that marked gains as to both the efficiency and capacity of naval boilers, would be secured by a careful observation and study of the draught condition at various points between ashpan and smokestack.

23. In order to secure for the day of battle increased speed for war-ships, naval administrators are justified in demanding of manufacturers of water-tube boilers increased coal consumption per square foot of grate surface. The weight thus saved in the reduction of the number of boilers should be exclusively applied to giving the machinery greater endurance by using heavier boiler lining and casings and more substantial auxiliaries. The space gained in the reduction in the number of boilers should be assigned to providing increased sized fire-rooms, evaporator rooms, and passageways in the boiler compartments. The fireroom conditions on board the modern battle-ship could not be much worse, whether viewed from the standpoint of providing for sanitary stokeholds or for an arrangement of firerooms where not only efficient stoking can be carried on, but an installation should be made in which there are adequate facilities for rapidly effecting routine examination and repairs. It is not surprising that there is excessive expenditure as regards cost of repairs, as well as rapid and excessive depreciation, and that the boiler endurance is exceedingly limited when marine steam generators are crowded in the manner in which they are now installed. Under existing fireroom conditions auxiliary feed and bilge pumps are likewise installed directly in the firerooms and even in niches cut out of the bunker compartments. As now arranged, the character of the installation of these appliances not only interferes with efficient stoking and repairs to the boilers, but the pumps themselves are constantly under either repairs or examination, due to the dust and grit that settle upon their working parts, and thus cause their early renewal. There can be no satisfactory installation, of either coal or oil burning appliances until an increase of space is allowed for the operation and preservation of boiler installation.

24. The absolute lack of endurance of both Scotch and mica water-gauge glasses for installation in boilers carrying over 250 lbs. pressure and subject to forced-draught usage was conclusively established. Reflex water-gauge glasses should alone be used on boilers which are subject to heavy forced-draught conditions.

25. Practically every form of commercial fire brick that was used in the boiler for the purpose of forming a deflecting arch disintegrated either under the action of the intense heat generated, or due to the action of the acids in the oil or coal. In case any form of arch or bridge wall is essential to the efficient or forced burning of liquid fuel, then special experiments should be conducted to secure a refractory brick that would possess endurance under the severest of forced-draught conditions.

26. For naval installations there should be supplied a fuel oil that will not flash under 175° F. The higher flash point required for naval than for merchant vessels is essential for the following reasons:—

- a. The war-vessel must be kept in readiness to proceed to the Tropics at immediate notice, and the firing of the guns subjects the naval ship to danger conditions, to which other types of vessels are not exposed.
- b. The fitting of numerous transverse bulkheads and a protective deck in a naval installation, combined with the fact that both machinery and boilers are exceedingly crowded, makes it

extremely difficult to properly ventilate certain compartments, and therefore in war-ships it will be necessary to use special precautions both in the stowing and in the handling of oil fuel.

- c. The fact that a large number of men must be permanently housed beneath decks on the naval ships will make it difficult to prevent the use of open lights in some of the lower compartments, and thus the danger of using oil as a fuel from this cause will always be greatest in naval vessels.

27. There should be no attempt made to use oil as auxiliary or supplementary to coal. Such an installation is certain to prove unsatisfactory, and the solution of the oil-fuel problem for naval purposes is only delayed by any attempt to inject a limited supply of oil fuel over a bed of incandescent coal. The mechanical feature of the problem having been satisfactorily met, the good of the service requires that any installation attempted should depend upon oil as a fuel and not any combination with coal.

28. In maritime construction no oil-fuel should be carried in compartments directly beneath the boilers. In case such compartments should ever be used as oil reservoirs, there might be danger of radiated heat from the boilers volatilising and exploding some of the hydrocarbons of the fuel oil. In case, also, there was any puncturing of the inner bottom, the hot ashes might reach the oil. The possibility of oil also reaching the bilges through improper manipulation of the valves of the manifold boxes is specially liable to happen.

29. The importance and necessity of always possessing a reserve supply of superior fuel were strikingly impressed upon the board, for during both the coal and oil experiments there was resulting delay due to the non-delivery of fuel. Special effort was taken at all times to maintain a reserve supply of coal, but from causes beyond the control of the board shipments of such fuel would be delayed. Particularly was it found difficult to secure hand-picked coal of superior quality, and in one instance such fuel could only be secured within reasonable time by having it shipped at express rates to the experimental plant. The necessity of maintaining at every naval station a large invoice of hand-picked coal of the very best quality, to be utilized for emergency and experimental purposes, was repeatedly emphasised. As for a reserve of coal for war purposes, it is highly probable that in a contest for the command of the sea an adequate reserve of fuel may be only one remove in importance from the possession of a reserve of ships.

30. In view of the fact that 48 per cent. of the world's output of crude petroleum is produced in the United States, and that practically our entire yield is secured from fields which are in pipe-line communication with important maritime and strategic ports, the board considers that a joint commission, representing commercial, manufacturing, maritime, and naval interests, should be authorised by the Congress, whose province it would be to formulate such rules and regulations as would provide for an economical, efficient, enduring, and safe oil-fuel installation. Heretofore the oil-fuel problem has been principally investigated by various individual interests which have sought to secure information along certain lines. As a result there has not been obtained that knowledge of the subject which would give to the country at large such development of the use of crude oil as a fuel as would be warranted, considering the natural advantages possessed by the United States in having at its command near great seaports such a large proportionate

supply of the world's production of the crude product. Particularly for the development of our commercial interests in the Gulf of Mexico and on the Pacific coast should the work of such a commission have an important influence in extending our prestige and power, whether viewed from a commercial, maritime, or naval standpoint.

The Board would urgently recommend that in all installations of water-tube boilers in naval vessels where economical boiler efficiency has not been obtained, that the commanding officers of such vessels be directed to make some experiments with different arrangement of baffling, and that official report be made of the performance of the boilers under these various conditions. Particularly is it recommended that where there is an excessive coal consumption per indicated horse-power, that the calorimeter nearest the base of the stack be reduced so as to cause complete combustion to be effected amid and not beyond the tubes. The compilation of the data secured from baffling experiments on various types of boilers would undoubtedly suggest important changes whereby the efficiency if not the endurance of such boilers would be increased.

31. The board regards the engineering or mechanical feature of the liquid-fuel problem as having been practically and satisfactorily solved. For manufacturing purposes the financial and supply features are the only hindrances to the use of crude petroleum as a standard fuel. For mercantile purposes the commercial and transportation features of the problem are existing bars which limit the use of oil fuel in merchant-ships. For naval purposes there is the additional and serious difficulty to be overcome of providing a satisfactory and safe structural arrangement for carrying an adequate bunker supply.

32. That in the consideration of the problem of attempting to use oil as a fuel for either marine or naval purposes it should be particularly remembered, that, by reason of the economic and commercial demands for crude oil for illuminating, lubricating, and other purposes, the available supply of the world's production of crude petroleum that could be used as a fuel would not meet over 3 per cent. of the world's demand for coal and other combustibles. For a time, therefore, the effort should be made to use oil fuel only for special purposes in particular localities.

33. The board considers that what will eventually be recognised as the most important result of these extended experiments is the collection of a great mass of trustworthy data concerning the comparative value of coal and oil as a fuel under various conditions. It should be observed that these data were secured with painstaking care and checked at the earliest practicable time after each test. Wherever it was found that discrepancies existed in any experiment the test was repeated, in order to discover if possible, the cause of the inconsistency. There have also been secured very complete and trustworthy data in regard to boiler efficiency and capacity.

In conclusion, the board desires to call attention to the fact that these experiments continued uninterruptedly for a period of twenty-eight months, and that for a considerable portion of this time there were no fewer than six commissioned officers giving special consideration to this subject. There were also employed in connection with this duty skilled draughtsmen and experts of the Bureau of Steam Engineering, as well as members of the Bureau's clerical staff. For one year there were available for this experimental work the entire crew of the torpedo boat "Rodgers."

The work represents an immense amount of labour, and as the board has been in correspondence with nearly every interest directly or indirectly

concerned with the use of oil as a combustible, it is believed that the report submitted will not only be of value to the Navy Department, but to the manufacturing and mercantile business interests of the nation.

Very respectfully,

JOHN R. EDWARDS,
Commander, U. S. Navy, Member.

W. M. PARKS,
Lieutenant-Commander, U. S. Navy, Member.

F. H. BAILEY,
Lieutenant-Commander, U. S. Navy, Member.

To the CHIEF OF THE BUREAU OF STEAM ENGINEERING.

GEO. W. MELVILLE,
*Rear-Admiral and Engineer-in-Chief, U. S. N.,
Chief of Bureau of Steam Engineering.*

MILITARY NOTES.

PRINCIPAL APPOINTMENTS AND PROMOTIONS, JUNE, 1905.

Generals.—His Majesty Alfonso XIII., K.G., G.C.V.O., King of Spain, General in the Army, to be Colonel-in-Chief of the 16th (The Queen's) Lancers.

Colonels.—Colonel J. H. Laye, C.V.O., C.B., from h.p., to be a Major-General in the Army, and to be a Major-General on the Staff, to Command the Infantry Brigade at Gibraltar. Colonel C. J. Mackenzie, C.B., from A.Q.M.G., 5th Division, to be an A.A.G. at Headquarters.

FRANCE.—*Autumn Manœuvres in 1905.* — The following additional regulations regarding the organisation of the French Autumn Manœuvres, already mentioned in the JOURNAL for May last, were issued in the form of a Ministerial circular on the 6th May:—

A. *Duration of Manœuvres.* — The total period of the Army manœuvres will be for 8 days, and that of the cavalry manœuvres for 7 days, not including the time employed in concentration and dislocation. Division manœuvres will last for 11 days. Infantry brigade manœuvres, cavalry brigade evolutions, and the manœuvres to be carried out by the troops stationed at Corsica, will last for 10 days, including going and returning. The period laid down for division and brigade manœuvres is only approximate; it will rest with army corps commanders to distribute the days allowed them for changes of station, amongst the units under their command, in the best manner to ensure the good organisation of the manœuvres, and so as to ensure to each of them at least 5 days' actual operations. The movements by road will be so regulated that the units thus moved will not have to march or manœuvre more than 4 days continuously without an interval for rest. At the same time, on the conclusion of a course, and in order to return to their garrisons, the march and manœuvre period may be increased to 5 consecutive days.

B. Employment of Cavalry Divisions.—On account of the organic differences, which distinguish the heavy from the light cavalry divisions, these larger units should not be indifferently employed on the same duties. Directors of manœuvres should take this into consideration in the various exercises, so as only to demand from either services compatible with their own organisation and mobility.

C. Night Marches and Actions.—The circular of the 25th February, 1904, with regard to garrison manœuvres, has already pointed out the importance of exercising troops in night marches and actions. It would appear, at the present day, from the lessons of the Russo-Japanese War, that in future hostile troops when in touch with one another will often be obliged to resort to that method of action, either to advance or to assault strongly defended positions, or, finally, to break off an action or commence a retreat. Night marches and actions present special difficulties which constant practice alone can overcome. It is therefore absolutely necessary to exercise troops more frequently in this special species of manœuvres. Fine weather should, consequently, be taken advantage of to carry out a certain number of night exercises, either as garrison manœuvres or during the autumn manœuvres.

D. Ammunition.—The allowance of blank ammunition for the various autumn manœuvres will be regulated in conformity with the information contained on a table attached to the circular.—*Revue du Cercle Militaire.*

Military Budget for 1905.—The difficulty in fixing the military budget for 1905 was increased by the change in the person of the War Minister. The financial year commences in France on the 1st January, and not on the 1st April, as is the case in England. The Government scheme, laid down in 1904, for the Budget for 1905 amounted in round numbers to 679,000,000 francs. Nevertheless, the then Reporter and the present War Minister, M. Berteaux, demonstrated in the Budget Commission that that sum was not sufficient, as the class put back in the autumn of 1904 was 17,400 recruits stronger than was provided for in the Government scheme. The present War Minister attempted to bring the increase of the recruit contingent into conformity with the financial situation by instituting a medical examination for recruits on enrollment in order that those who did not entirely come up to requirements might be discharged. It may be here remarked that no regular legal peace establishment is laid down, as in Germany, but that this fluctuates according to the necessities of Army requirements. Thus every man fit to serve must be enrolled. The War Minister further proposed to raise from 8 to 10 per cent. the deduction which is made in the Budget with regard to the maintenance of men granted furlough, who receive no pay or rations. From this, and with due regard to certain other changes, the new estimate amounted to 683,500,000 francs, viz., in round numbers, still about 7,000,000 francs more than the previous year. The Commission nevertheless raised the estimate to 685,692,453 francs (or nearly 9,000,000 francs more than 1904), as they laid down that former regular supplementary credits should be demanded in the course of the current year, which had amounted to about 17 million francs in the last few years.

In addition to the increase of the contingent of 17,400 men, it had in the meantime been discovered that the number of volunteers, too, who

wished to take advantage of the privilege of the one year's voluntary enlistment before the introduction of the two years' period of service, had increased by 2,600 men. Thus on the whole the number of men with the colours was raised by 20,000 over that originally foreseen. The War Minister therefore decided to discharge 8,400 men. The Commission agreed to this step, and the War Minister thereupon ordered a medical examination and subsequent discharge. The excess in the peace establishment was thus reduced from 20,000 to 11,600. The Commission finally decided that the proposed raising of the deduction in the Budget, mentioned before, for the maintenance of men on furlough, should be from 8 to 9½ per cent., instead of from 8 to 10 per cent.

The following details of the Commission's Report are worthy of note :—The Colonial Army, so far as it is quartered in France, consists of 12 infantry and 3 artillery regiments, or altogether 26,000 men in round numbers; in addition to these there are stationed in the Colonies 6 infantry regiments, 4 independent battalions, 4 artillery and 14 native regiments, or altogether 18,000 Frenchmen and 35,000 natives. This important French Colonial Army, therefore, consists altogether of 79,000 men, including 35,000 natives.

The total number of non-commissioned officers in the Army amounted, in 1904, to 41,299, of whom 25,332 were re-engaged men. The present number of Reserve officers is far from being sufficient. In 1905 there is a shortage of 8,611, of whom 6,416 were in the infantry. There have for many years been complaints in France over the dearth of Reserve officers.

The infantry pack question, too, which has been exciting much attention in France of recent years, was also dealt with by the Commission. The present knapsack is too heavy, and the method of carrying it too disagreeable, although the weight of the pack has been reduced to 8·3 kilogrammes (about 18½ lbs.). The two days' iron rations, which is carried by the French infantry soldier, is thought to be too scanty, as battles nowadays last for several days. The pack will therefore be divided into two parts. One taking the place of the present knapsack consists of a soft wrapper, which when filled should not weigh more than 3·5 kilogrammes (a little over 7½ lbs.). It therefore contains only the most indispensable articles, viz., the iron rations, cooking utensils, and one shirt. All cartridges and entrenching tools are carried on the waistbelt. The other part consists of a bundle, and contains all the remainder of the clothing and other articles. This bundle, together with the officers' baggage and a portion of the third iron rations about to be introduced, will be carried on the company wagon, which has hitherto been principally used as an ammunition wagon, but which will in future be used entirely as a baggage wagon. For that reason the battalion will be provided with a new ammunition wagon. By these means the weight carried by the soldier will be reduced to 5 kilogrammes (about 11 lbs.). The experiments made in this direction have given such satisfaction that the introduction of the new pack is now imminent. The Higher Council of War, however, after careful deliberation have decided that further experiments shall be carried out in the larger units during the 1905 manœuvres.

The report gives a summary of the manœuvres, from which it may be seen in what great extent army corps, during later years, have been assembled for Army manœuvres. The following Army manœuvres have taken place :—

- 1900—One of 4 army corps.
 1901—Two of altogether 6½ army corps.
 1902—One of 2 army corps.
 1903—Two of altogether 4 army corps.
 1904—Two of altogether 4 army corps.

For the present year two great Army manœuvres have been planned, in which 6 army corps and 5 cavalry divisions will take part.—*Précis from Internationale Revue über die gesamten Armee und Flotten and Rapport du Budget Général de l'Exercice, 1905.*

GERMANY.—*Purchase of Army Remounts in 1904.* — The remount operations in 1904 have once more demonstrated with what facility the military administration can procure the horses necessary for the requirements of the Army. In spite of the campaign carried out in favour of breeding heavy horses unfit for service in the cavalry, the number of thoroughbred horses brought before the Prussian Remount Commissions alone, excluding Bavaria, Würtemberg, and Saxony, amounted last year to 24,263, showing an increase of 1,764 on the report of 1903. The increase is due especially to the two Prussian provinces and to Meklenbourg-Schwerin. These fluctuations must be attributed to purely accidental and temporary causes, such as the abundance or dearth of forage, meteorological circumstances, which cause, in a more or less degree, mortality amongst the foals, etc. One can thus only arrive, in a general way, at the progress or otherwise of horse-breeding in the various districts.

PRUSSIA.

The 5 Prussian Remount Commissions attended 310 public and 200 private sales. The total number purchased amounted to 10,003 horses. The average price paid was £47 10s.; it was £45 in 1901, and the breeders at that time asked that it should be raised to £46. The numbers were thus in excess of requirement. The proportion of private sales was exceptionally large in East Prussia (141 private against 81 public sales). This fact is characteristic of the larger horse-breeding districts, for such sales could not take place without the producers or breeders who show a minimum of 20 horses. The results of the remount operations allow one to draw some conclusions with regard to the breeding conditions of the different provinces.

East Prussia.—Breeding is very flourishing, particularly in the Lithuanian district, viz.: in the East and North-East of the province, where every cultivator is a breeder, and where, at the same time, the greater proportion of the larger producing and breeding establishments may be found. The best produce comes from the districts situated in the neighbourhood of the Trakehnen, Gudwallen, and Insterburg stud farms; a large proportion of them are furnished to the Guards.

West Prussia.—The principal breeding centres are situated in the plains of the Vistula and the Nogat. Horses of Lithuanian origin are bred there, which are equal to those of East Prussia. The production of thoroughbreds increases there year by year, in spite of the efforts made to develop the breeding of heavy horses.

Posen.—This province is also in a prosperous state. Horsebreeding extends throughout the whole district, but is almost entirely in the hands

of large landowners, who have a marked preference for stallions of eastern strain. It is for this reason that many beautiful light horses for hussars are met with there. Latterly, draught horses have, nevertheless, been also bred there. Breeders frequently supplement their own production with purchase of foals in Lithuania.

Silesia.—The nature of the country does not lend itself to a very great development of horse-breeding. Nevertheless, this province may be regarded as a sort of reserve, which may be relied on in case of need.

Pomerania is in much the same condition, on account of its lack of pasture.

Brandenburg.—Thanks to the agitation in favour of breeding heavy draught horses, Brandenburg continues to decline in the breeding of remounts, although certain portions of the country are well adapted for the purpose.

Hanover.—This province holds the second place for the production of good horses. The most fertile region, for quantity as well as quality, and even as regards large draught horses, is situated between Hambourg and Cuxhaven.

East Friesland so rich in horses, gives but few to the remount service, as its horses are too heavy, and only fit for artillery service. But as in peace time, artillery horses serve also for the riding instruction of the drivers, the number of purchases made in this district is but small. On mobilisation, on the other hand, the East Friesland horse would be of the greatest service.

Oldenburg and Schleswig-Holstein for the same reason furnish but few horses to the remount, although both these districts produce excellent horses, much sought after for purposes of commerce and luxury.

Mecklenbourg. — The two Duchies of Mecklenbourg, especially Schwerin, make great strides in breeding for the remount service and hold the third place in that respect, immediately after East Prussia and Hanover. But few of the Mecklenbourg horses are products of the country; its excellent pasturage is, however, utilised to develop the foals purchased in Hanover and Holstein. Even those bred in the country no longer recall the former well-known Mecklenbourg horse; they belong to a new breed, originating in Hanover and Holstein, and resulting from a crossing of these two breeds with a certain dash of the thoroughbred.

Baden and Alsace-Lorraine give but small assistance to the remount service. It is the same with the Duchy of *Saxony*, where only heavy draught horses are found, and with *Westphalia*, where the horsebreeding is insignificant. For the first time, the *Rhenish Provinces* take their place for providing remounts for the Army by furnishing 65 large Rhenish-Belgian draught horses of great value, for the foot artillery detachments.

BAVARIA.

On account of the great parcelling out of property, Bavaria is not a good horse-breeding country, and the preference given the heavy breeds causes the production of proper remount animals to take second place. The administration of stud farms has made many efforts to introduce a good artillery horse into the country, but has hitherto not obtained satisfactory results, as only 23 per cent. of the necessary horses could be purchased in Bavaria, whilst 65 per cent. come from East Prussia and 12 per cent. from Holstein. The average purchase price of horses

was, in Bavaria, £46, not including those purchased for the foot artillery, the average price of which amounted to £60. The total number of purchases was 1,219 remounts, plus 24 fully-developed heavy draught horses for the foot artillery.

SAXONY.

The mountainous nature of the country does not permit of horse-breeding on a large scale. The horses necessary for the Saxon Army come, in a large proportion, from Prussia. Saxony purchased, in 1904, for the Army, 1,169 remounts at an average price of £45 10s., 56 of which alone came from the country itself. Almost all, 996, came from East Prussia. In addition, 18 heavy draught horses, for the foot artillery, were purchased in Schleswig at an average price of £66 10s. each.

WÜRTENBERG.

In accordance with its military convention with Prussia, Württemberg draws its cavalry remounts from Prussian depôts. Up to recent years it also drew a large portion of artillery remounts from the same source; but it now purchases directly the horses necessary for that branch of the Service. In 1904 Württemberg purchased 251 remount horses, at an average price of £45 15s., of which 96 came from the country itself.

The following table shows the purchases made in 1904 for the German remount service:—

	Young Horses.	Seasoned Horses for Foot Artillery.
Prussia	10,003	131
Bavaria	1,219	24
Saxony	1,169	18
Württemberg	251	—
Total	12,642	173

—*Revue Militaire des Armées Étrangères.*

RUSSIA.—*New Instructions for Infantry Advancing under Fire.*—We read in the *Razviéditchik*:—

“The experiences of the present war have shown the necessity for introducing some changes into our Infantry Regulations of 1900, especially with regard to the movements of units in battle formation, for which movements the modern efficacy of musketry and artillery fire must be taken into consideration.

“The Minister of War, therefore, without, for the present, altering the Regulations, which will be revised after the war with Japan, has given instructions to the chief commanders of military districts that during the manœuvres which will take place during the summer the following methods of instruction should be applied in such a manner as to harmonise the advance of the firing line with the intensity of the enemy's fire:—

1. To put the line in motion, the preparatory command, ‘Rise!’ will be abolished, and the command will be simply: ‘Squad (section or line), advance!’

- "2. At great distances from the enemy, dense lines will not be formed; it is not necessary, as the rapidity of fire permits a sustained fire to be maintained, whilst putting but a small number of men into the firing line.
- "3. Whilst under hostile fire, the line will advance as follows:—
- "a. By rushes of about 100 paces, carried out by the more or less large portions of the firing line. This species of advance may be maintained when the hostile fire is weak, and when at some distance from the enemy.
- "b. By rushes of from 30 to 40 paces by small portions of the line (less than a group of 12 files). This sort of advance may be made when the hostile fire is more intense.
- "c. By short rushes of individuals. This sort of advance will be resorted to when the enemy's fire is very hot, at whatever distance the latter may be. In these rushes men may run stooping.
- "d. By very short advances of individuals creeping.
- "So as not to permit the aimed fire of the enemy on portions of the line advancing, those rushes may be carried out without taking into consideration the order in which the units may momentarily be placed in line. In other words, the advance movement may be commenced sometimes by one and sometimes by another fraction of the firing line. The commander of the firing line will employ at will one or other of the methods of advance.
- "When the line advances from one firing position to another, special care should be taken that this movement is made imperceptibly, as far as possible, by a proper use of the ground and corresponding methods of advance.
- "4. In all cases the advance of the line should also take place by command, without the commander of a group placing himself in front of his unit.
- "5. The reinforcement of the firing line will be carried out under cover, by making use of all folds in the ground.
- "6. In actions with the Japanese it has been proved that firing lines did not stop at their last firing positions of 300 to 400 yards of the enemy, as is laid down in our Regulations, but that they approached as close as possible to their adversaries, even firing point-blank all the time, and that they charged cheering almost simultaneously with the reserves. Troops must be accustomed to proceed thus during the summer manœuvres; firing lines will continue to fire up to the moment for actually using the bayonet.
- "7. Reserves, when advancing in zones swept by artillery and rifle fire, will adopt the least vulnerable formations, as laid down in the 1900 Regulations; but they should be drilled in advancing in single rank and in making use of the same methods as the firing line, viz.: rushing, creeping, etc.

- "8. It is absolutely essential to convince all troops of the necessity for entrenching. Should circumstances permit, they will also be exercised at it.
- "9. The point of the hostile position selected as the objective for the attack must be carefully pointed out to all the units engaged."—*Revue du Cercle Militaire*

The Employment of Artillery in the Russo-Japanese War.—The following has been communicated by the Director of Military Operations:—

The *Rivista di Artiglieria e Genio*, of January, 1905, gives some interesting notes on the above subject:—

1. The impressions of Mr. G. Pardo, the correspondent of the *Tribuna* newspaper, with the Russian Army in Manchuria, at the battle of Yangtsu-ling, on 17th July, 1904.

The Russian artillery positions were selected beforehand. The guns were generally behind the brow of heights, not on the actual crest. Each gun was covered by a small trench masked by branches and brushwood.

During the artillery duel, the Russians directed their fire, not only on the Japanese batteries, but on a height and ground near it, where they believed the Japanese to be massed in great numbers.

It is a characteristic fact that during the whole day, none of the positions of the Japanese artillery—whose fire was very effective—could be located with sufficient precision to admit of fire being directed upon it. Occasionally a faint cloud of smoke would be seen, which may have indicated the position of their guns, but the Russians were convinced that this was merely a stratagem on the part of the Japanese to mislead them as to the actual position of their batteries.

The Japanese artillery fire was intermittent. After a violent bombardment of a given position, the fire would cease, and would not be resumed from the same place. The Russians claimed that this was due to their having silenced the enemy's fire; the real reason was that when the Japanese believed that they had achieved their purpose from a particular position (and perhaps also the Russian fire became annoying there), they brought their guns into action again in another position, without ever permitting the guns to be seen, and making use of indirect fire almost exclusively.

The Russian artillery, on the contrary, remained fixed in the positions first selected, because it was impossible for them to move except on roads: it had only been possible to occupy the positions themselves—and that with much labour and fatigue—by means of roads made by the engineers.

The Japanese used, against artillery, a shell with a very effective burst, but with a somewhat limited radius of action.

The fire, on both sides, was always carried on from a flank, and never in battery salvos. The fire of the Russians was more rapid than that of the Japanese.

Notwithstanding the use of indirect fire by the Japanese, their observation of the field of battle, and the facility with which they immediately directed their fire on any particular point, were marvellous. They never fired without a definite object, and never missed a single opportunity offered by the movements of troops or wagons on the Russian side.

It would be difficult to make deductions, from the action of Yangtsu-ling, as to the distance at which artillery fire may be opened. The line of heights occupied by the opposing forces being approximately parallel, decided the initial range, beyond which it was impossible to see.

Similarly no great light was thrown on the co-operation of artillery with infantry, in individual episodes of the fight, the advance being made simultaneously along the whole front, and dependent on the action of the batteries; these rendered the Russian positions untenable by their fire, occupied them, and then pushed on to successive positions, while the infantry kept up a strong fire on the Russian troops.

The Japanese infantry displayed admirable discrimination and activity; the latter is a matter of character, but the discrimination and good judgment come, beyond a doubt, from instruction and discipline, which may be described as perfect. In no other way can be explained the rapid advance of small groups of 50 to 100 men, almost independent of one another, but directed and guided by one common impulse, directed on the same objective, and reaching it simultaneously from different points, without hesitation or confusion.

2. [General Rohne's article in the December No. of the *Jahrbücher für die deutsche Armee und Marine*, on the employment of artillery in the Russo-Japanese War.]

Field artillery has had, according to reports received, a great influence on the results of the actions which have taken place. The Japanese artillery especially has played a great part in the successes gained.

This fact has given occasion to the opponents of the re-armament of the German artillery to assert that the Q.F. gun of the Russian artillery has not shown itself to be superior to that of the Japanese.

The details of the present war are not yet known in sufficient detail to justify such general conclusions. No doubt the successes gained have often been due to the action of the Japanese artillery, or at all events has been prepared and led up to by their artillery.

But this has been due to various reasons:—

The Russians were in numerical inferiority on the Yalu, 15,000 Russians with 46 guns, against 54,000 Japanese with 258 guns.

At Wafangou, 36,000 Russians with 94 guns faced 42,000 Japanese with 200 guns.

The Russian artillery in Eastern Asia is chiefly armed with the Putiloff Q.F. gun, pattern 1900, which is defective. It gives good ballistic results, so far not attained by any other field gun (throwing a projectile weighing 6.55 kilogrammes (14.4 lbs.), with a m.v. of 589 metres (1,932 f.s.); but this is the very cause of the weak point of the gun. The ballistic results are attained at the sacrifice of mobility, for the gun weighs 1,019 kilogrammes (21.6 cwt.), in action, and with the limbers as much as 1,884 kilogrammes (37.8 cwt.). A weight such as this would be serious enough in countries like Europe, where there are plenty of roads, but is a most serious drawback in the mountainous districts of Manchuria.

The gun is not placed—as other Q.F. guns—in a cradle, upon which the recoil acts parallel to the axis of the gun, but rides upon the top carriage, on which the elevating gear is adjusted, and which takes part of the recoil, which is controlled by a hydraulic buffer.

The gun is not returned into position by the expansion of compressed air, nor by recuperative springs, but by rubber rings, upon which it is impossible to rely.²

¹ According to the latest information, the Japanese field and mountain guns amounted to 108, with 24 mortars (12 c.m.).

² The Putiloff gun, pattern 1902, however, seems to have recuperative springs.

It follows that the gun does not remain stationary when fired. The nominal rapidity of firing (17 rounds a minute) can only refer to unaimed shots, as the gun's lack of stability renders careful laying necessary, which considerably reduces the rate of fire. At the most, it would be possible to fire some 11-12 aimed shots a minute, and even this would hardly be possible under service conditions.

The fact that officers and men had little or no practice with the new gun had a great effect upon the action of the Russian artillery. The order introducing the new gun was only approved by the Tsar in May, 1904—several months after the commencement of hostilities.

Numerous instances have been mentioned in which the action of the Japanese mountain artillery was decisive. This tends to show that field guns were not used in the difficult ground, or could not be got up into action in good time. If this were so with the Japanese, it would apply still more to the heavier *matériel* of the Russians. It is known that the Japanese mountain artillery is considerably superior to that of the Russian.

It is said that the Russian artillery is improving, as the men are becoming accustomed to the new gun.

One great defect in this new Russian gun, and one not seen in any other Q.F. gun, is that its great weight and lack of stability preclude the use of shields for the protection of the gun detachment.¹

The *Russki Invalid* gives an instance, in the battle of Liao-yang, in which shields would have been of great service in protecting the gunners from infantry fire, which prevented the guns coming into action.

Neither Russians nor Japanese can be said to have a thoroughly modern gun, fully up to modern requirements. The Russian gun has great ballistic qualities, but is not sufficiently mobile. The Japanese gun is very light, and consequently is only mediocre from a ballistic point of view.

In peace time field artillery is ever straining after greater mobility, while in war, or immediately after war, the desire for greater power comes to the fore."

N.B.—The foot-notes appear in the original Italian.

CORRESPONDENCE AND REPLIES TO QUERIES.

"FIGHTING IN ENCLOSED COUNTRY, WITH SOME NOTES FROM THE ESSEX MANŒUVRES."

To the Editor of the JOURNAL OF THE ROYAL UNITED SERVICE INSTITUTION.

SIR,—Your issue of the 15th of May contains a report of some remarks made by me in the discussion which followed the excellent lecture on "Fighting in Enclosed Country," delivered before the United Service Institution on 31st January last. Speaking on the spur of the moment, I referred in these remarks to some "manœuvres held by Sir

¹ The gun adopted in Norway, the weight of which also precludes carrying shields, has special wagons for carrying shields alone, which are affixed to the gun when desirable.—(Note by the Editor of *R.A.G.*)

William Butler at Ashdown Forest some five or six years ago, as the only attempt made previously to the Essex manœuvres of last year to practise troops in enclosed country." Will you allow me to correct this reference by saying, that the Ashdown Forest manœuvres were held by Lieut.-General Lord W. Seymour, then in command of the old South-Eastern District? Sir W. Butler's manœuvres were carried out in the following year over the more open country round Arundel. I regret having confused the two exercises in my mind,

I am, etc.,

E. A. ALTHAM, Colonel *h.p.*

London, 26th June, 1905.

"SPEED AND CONSUMPTION OF STEAMSHIPS."

To the Editor of the JOURNAL OF THE ROYAL UNITED SERVICE INSTITUTION.

SIR,—I have read in the April number a reply to my paper on the speed and consumption of steam-ships.

The writer admits that he is not a professional man, and writes as a statistician. His method may be very useful from that point of view to compare the performances of different vessels as weight-carriers after their voyages are accomplished, though weight-carrying is not the sole criterion of merit even in all mercantile vessels, much less in the Navy, and economical speed may be a variable quantity.

The question of comparative steam-ship efficiency is a very complicated problem, and no man has been able hitherto to put forward a solution that will be generally admitted as applicable to different types of vessels, nor did I attempt to do so.

My paper was originally written for the instruction of young navigators in my own profession, but I was persuaded by a distinguished naval writer to offer it to your valuable JOURNAL as containing information on a very practical subject that might be of use to the naval officer who cannot be a specialist in every branch of his profession.

Now, whilst there may be many conflicting views of the comparative efficiency of different vessels or different types of vessels, there cannot be nearly the same latitude of opinion as to whether the captain of a particular ship has made the best and most judicious use of the resources at his disposal to accomplish the task set him according to the object in view, which may or may not be to cover a given distance at a minimum expenditure of fuel.

That was the problem I set myself to solve when, just a quarter of a century ago, I first took command of a large steamship.

No man can be the judge of his own work, or perhaps an unbiassed judge of that of a rival, so I leave each of those for whose benefit my paper was written to decide for himself whether the rules I have advocated, which were partly adopted and partly evolved, or those of my critic are most likely to be of service to him when, at the commencement or middle of a passage he has to consider the coal endurance of his vessel in connection with her speed and a safe margin at the finish, and the winds and seasons he has to pass through *en route*, with perhaps a Togo waiting for him at the end of his tether—a tether whose length is measured by the bunker capacity and elasticity by the skill shown in utilising it.

My critic seems to have a rooted objection to horse-power, and says that as it is only a connecting-link it should be ignored. If he went into the market to-morrow to buy a steam-ship or a motor car, I feel very sure that one of the first questions he would ask would relate to its H.P. Since the days of Watt, that has been the recognised standard of comparison. Why, then, ignore it? Like the original connecting-link, it does not take up much room, and is very useful. He tells us that he has actually known a propeller so wasteful of coal that the ship's consumption was very high, though the engineer said it was very low per I.H.P. Now this faulty propeller would keep on wasting the coal no matter what methods are employed to arrive at the result, and there is but one cure, i.e., to change it, and if necessary to keep on changing it, or the number, shape, area, or pitch of its blades till you get a propeller to suit the ship. That is the special business of the engineer, just as finding the best trim is that of the captain, which he does not want elementary advice about.

I did, however, write a paper on this subject for the *Nautical Magazine* ten or twelve years ago, not on the best trim for a particular ship, because that is a practical question that each seaman has been accustomed from time immemorial to solve for himself, but how to allow at sea, as well as in port, for changes in draught and trim, due to placing weights in the hold, coal burnt, ballast tanks filled, etc. My method was an adaptation or modification of the methods of the naval architect to meet the wants of the practical sailor. By taking a mean position for what I called the "tipping centre" (centre of gravity of the plane of flotation), and the mean value for the moment to change trim one inch, I showed how to construct tables for each particular vessel, so that after a ten days' run at sea the trim and draught could be estimated very closely, though she had perhaps consumed 1,000 tons of coal, 200 tons of water, and filled several hundred tons of water ballast in different tanks in the double-bottom.

The Admiralty co-efficient, or rather co-efficients (for there are two, though I only alluded to the displacement co-efficient), are simple to those who understand them, and if they do not tell you everything, they give some idea of the comparative merits of two ships of similar type.

Steaming times and tons per day are every-day quantities to the navigator and the engineer, and are easily tabulated when desirable. It might perhaps interest my critic to know that I have particulars of this kind tabulated for every run, long and short, and every complete voyage I have made for over 25 years, including the miles per ton for all purposes, and that the results agree very closely with the theoretical rules I have given—rules which from their nature cannot be mathematically accurate, but are at least more scientific than those that lump together coal burnt at sea, which varies, as some power of the speed with that used in port, which depends on the time the ship remains there.

Nor do I think that the power of the speed not being constant detracts materially from the value of the rules, because the change is gradual, and for a considerable range of speed I have found the cube rule sufficient. Whilst freely admitting that they are only approximate, I believe they give a sufficiently accurate result in practice of a problem that is probably incapable of a strict mathematical solution, and I find it difficult to reconcile Mr. Gray's criticisms with his admission of the crudity of his own method. I got my first ideas on the subject from the late Dr. Kirk, many years before the discovery of the decrease in resistance at very high speeds. Much has been learnt since then, and it

is quite possible that this problem can be attacked and solved either approximately or accurately in more ways than one. Rankine, Froude and Mansel have other theories that I have never seen put into a practical shape for the guidance of the navigator, though they are doubtless ingenious and highly instructive to the naval architect, and may be capable of development for use at sea.

Yours faithfully,

J. F. RUTHVEN.

Orient Steam Navigation Co.'s ss. "Orontes."

Query No. 4.—The uniform worn by the Duke of Wellington at the Battle of Waterloo is thus described in Hooper's "Waterloo":—"The British troops and the German Legionaries knew the figure of the officer with a 'firm countenance,' who rode by on his chestnut horse, wearing a blue Spanish cape, white cravat, white buckskins, and plain cocked hat, and they cheered him as their comrades did when he rode alone up the hill at Sauroven." A picture of the "Battle of Waterloo," by G. Jones, R.A., in the possession of the United Service Club, represents the Duke in the uniform described by Hooper, as does also another picture of Waterloo by A. Cooper, R.A.

Query No. 5.—An artillery clinometer is an instrument by means of which quadrant elevation is given to the gun, and by which the inclination of the trunnions to the horizontal can also be found.

Query No. 6.—Works recommended to be read dealing with the North-West Frontier of India are the following, viz:—"The Indian Borderland," by Holdich; "Across the Border" and "Punitive Expeditions on the N.W. Frontier of India," by Oliver; "Eighteen Years in the Khyber," by Warburton; "Lumsden of the Guides," by Elsmie; "Our Scientific Frontier," by Andrew; "The Russo-Afghan Question and the Invasion of India," by Malleon; "Record of the Expeditions against N.W. Frontier Tribes since the Annexation of the Punjab," by Paget and Mason; "To India: Military, Statistical, and Strategical Sketch—Plan of Future Campaign," translated from the Russian of Lebedev by Holman; and "Campaigns against India from the West and through Afghanistan," translated from the Russian of General Soboleff by Gowan. The two latter have been published in the JOURNAL of the Royal United Service Institution.

NAVAL AND MILITARY CALENDAR.

JUNE, 1905.

2nd (F.) 2nd Bn. the Buffs (East Kent Regiment) left England for South Africa in the "Dilwara."

5th (M.) H.M. the King of Spain arrived in London.

7th (W.) The Norwegian Storting deposed King Oscar.

- 8th (Th.) Submarine "A8" foundered in Plymouth Sound.
 " " 2nd Bn. the Duke of Cornwall's Light Infantry left England for Gibraltar in the "Dunera."
 " " H.M. the King and H.M. the King of Spain attended a review at Aldershot.
 " " Germany invited the Powers to a Conference regarding Morocco.
 10th (Sat.) H.M. the King of Spain left England.
 " " Russia and Japan accepted the proposal of the President of the United States for a Peace Conference.
 12th (M.) Submarine "A8" was floated.
 13th (T.) 2nd Bn. the Duke of Cornwall's Light Infantry arrived at Gibraltar from England in the "Dunera."
 " " 3rd Bn. Royal Warwickshire Regiment left Gibraltar for South Africa in the "Dunera."
 14th (W.) The Report of Lieut.-General Sir William Butler's Committee on South African Army Stores was published.
 15th (Th.) H.M.S. "Aboukir" paid off at Portsmouth from Mediterranean.
 " " Princess Margaret of Connaught was married to Prince Gustavus Adolphus of Sweden at Windsor.
 17th (Sat.) Launch of first-class battle-ship "Hibernia" at Devonport.
 " " Launch of first-class armoured cruiser "Achilles" at Elswick.
 " " A British force was ambushed in Southern Nigeria and lost 12 killed and wounded.
 18th (S.) H.M.S. "Juno" arrived at Plymouth from Mediterranean.
 22nd (Th.) Correspondence regarding the Administration of the Indian Army was published.
 24th (Sat.) H.M.S. "New Zealand" commissioned at Portsmouth.
 25th (S.) H.M.S. "Thetis" arrived at Sheerness from China.
 26th (M.) H.M.S. "Juno" paid off at Chatham.
 " " H.M. the King visited the Royal Military College, Sandhurst, and the Staff College, Camberley.
 " " Prince and Princess Arisugawa of Japan arrived in London.
 " " A Royal Commission was appointed on the South African Army Stores.
 27th (T.) H.M.S. "Juno" commissioned at Chatham for Channel Fleet.
 " " 2nd Bn. the Buffs (East Kent Regiment) arrived at South Africa from England in the "Dilwara."
 30th (F.) The birthday of H.M. King Edward VII. was celebrated.

FOREIGN PERIODICALS.

NAVAL.

ARGENTINE REPUBLIC. — *Boletín del Centro Naval*. Buenos Aires: May, 1905.—Has not yet been received.

AUSTRIA-HUNGARY. — *Mittheilungen aus dem Gebiete des Seewesens*. No. 7. Pola: July, 1905.—"Observations on the Russo-Japanese War" (*continued*). "The Tactical Co-operation of Army and Fleet." "A Universal Measuring-Apparatus for Geodetic, Military and Naval Purposes." "The English Naval Estimates for 1905-06." "The Genesis of Sun Spots and Protuberances." "Foreign Naval Notes."

BRAZIL.—*Revista Maritima Brasileira*. — Rio de Janeiro: February, 1905.—Has not yet been received.

FRANCE.—*Revue Maritime*. Paris: Has not yet been received.

Questions Navales: Revue Générale de la Marine. Paris: 10th June, 1905.—“The Yachting Automobile.” “The Recruiting and Promotion of the Personnel of the Fleet” (*continued*). “The Question of a New Building Programme.” “A *propos* of the Inspector.” “The French Oyster Industry.” “Once More the Question of the Boilers.” “Foreign Naval Notes.” 25th June.—“National Policy: Naval Policy.” “The Yachting Automobile and Motors.” “The Necessity of Photographic Apparatus on Board Ships of War: Photography in Colours.” “Table of the Complements of Some Modern English Ships.” “Proposed Creation of Special Grades.” “Organisation of the Administrative and Financial Service of the Board of Works.” “Foreign Naval Notes.”

La Marine Française. Paris: May-June, 1905.—“A League of Naval Progress: The Fleet to be Constructed; Where ought it to be Built? How ought the Work to be Done?” “The Battle of Tsushima.” “Boats for War Purposes.” “The ‘Sully’ and our Naval Forces in the Extreme East.” “The Defence of the British Empire and the German Danger.” “The Control of the Subsidised Maritime Companies.” “The Emperor William and the German Navy League.” “The Mercantile Marine and the Question of Transport in Spain.” “Foreign Naval Notes.”

Le Yacht. Paris: 3rd June.—“The Administration of the Navy.” “Yachting Notes.” “Tsushima.” “The Arctic Exploration Ship ‘Roosevelt.’” 10th June. — “Composition of Squadrons and Naval Divisions in 1906.” “Yachting Notes.” “A *propos* of the Loss of the ‘Sully.’” “The Spanish Mercantile Marine.” “The Return of the ‘Charcot Mission.’” 17th June.—“The Crews of the Fleet.” “Yachting Notes.” “The Employment of Petrol Motors in the Navy.” 24th June.—“The Loss of the English Submarine ‘A8.’” “Yachting Notes.” “The U.S. ‘Scouts.’” “A German Motor Vedette-Boat.”

Le Moniteur de la Flotte. Paris: 3rd June, 1905.—“The Logic of Events.” “The Naval Manœuvres.” “Our Naval Forces in 1906.” “The Navy in Parliament.” “The ‘Sully.’” 10th June.—“To-morrow!” “The Battle of Tsushima.” “The Defence of Indo-China.” 17th June.—“Dirigible Torpedoes.” “The Navy in Parliament.” “Naval Constructions.” “The Russo-Japanese War.” “The Situation on the ‘Niger.’” 24th June.—“Some Observations.” “The Navy in Parliament.” “The Battle of Tsushima.” “The *Défenses-Mobiles*.”

GERMANY.—*Marine Rundschau*. Berlin: June, 1905.—“The Battle in the Straits of Corea.” “School Education, and the Naval Officer’s Course of Study.” “American Naval Policy.” “The New French Naval Pay Regulations.” “The Summer Meeting of the Ship-Building Technical Society at Danzig.” “MM. De Lanessan and Lockroy on the French Building Programme.” “The Real and Trade-Political Importance of the World’s Oceans.” “On the Survey of the German Protected Territory in the South Seas.”

ITALY. — *Rivista Marittima*. Rome: June, 1905. — “The Battle of Tsushima.” “The Real Problems of Radio-Telegraphy.” “The Expansion of Italy Abroad.” “A Problem in Nautical Astronomy.” “Nautical Automobilmism.” Letters to the Director.—“On the Balancing of the

Organs of Distribution in Steam Engines." "On Ice-Making Machines in Our Ships of War." "Foreign Naval Notes."

PORTUGAL.—*Revista Portuguesa, Colonial e Maritima*. Lisbon: May, 1905.—"Mossamedes." "A Brief Notice on the Naval Arsenal." "Two Hydrographical Problems of the Gaza Country" (*concluded*). "Naval Notes."

Annaes do Club Militar Naval. Lisbon: February, 1905.—"The Russo-Japanese War." "Destruction of the Russian Fleet" (*continued*). "A Monument of the Zaire." "Naval Matters." "A Practical Study on External Ballistics." "Naval Architecture" (*continued*). "Foreign Naval Notes."

SPAIN.—*Revista General de Marina*. Madrid: June, 1905.—"The Military Services and Imprisonment of Cervantes." "A Brief Study on Cruisers." "Experiments with Wireless Telegraphy." "Coast-Defence." "Foreign Naval Notes."

MILITARY.

ARGENTINE REPUBLIC.—*Revista del Boletín Militar del Ministerio de Guerra*. Buenos Aires: 1st May, 1905.—"The Transformation of Cavalry" (*continued*). "Rifle Societies." "The Russo-Japanese War and its Critics." "The Chief Work." "The Fight Between Infantry and Machine Guns" (*continued*). 25th May.—"For Country." "Description of a New Automatic Machine." "Port Arthur." "Organisation of General Staffs." "The Fight Between Infantry and Machine Guns" (*continued*). "The Transformation of Cavalry" (*concluded*).

AUSTRIA-HUNGARY.—*Danzer's Armee-Zeitung*. Vienna: 1st June, 1905.—"The Russo-Japanese War" (*continued*). "The Campaign of 1792." 8th June.—"Annihilation of the Russian Fleet in the Sea of Japan." "History of the War of Independence." "Macedonia" (*concluded*). 15th June.—"Separate Inspector-Generals." "The Russo-Japanese War" (*continued*). "History of the War of Independence" (*concluded*). 22nd June.—"Modern Cadets." "The Russo-Japanese War" (*continued*). "Some Proposals for a Change in the Repeating Rifle, M. 95." 29th June.—"The Cavalry Action at Wysokow, 1866." "The Russo-Japanese War" (*continued*). "Soldier's Wives."

Organ der Militär-wissenschaftlichen Vereine. Vienna. Vol. LXX. Part 4, 1905.—"The Training of Infantry for the Attack." "Interior Economy in the Army."

Mittheilungen über Gegenstände des Artillerie- und Genie-Wesens. Vienna: June, 1905.—"On the Establishment of Unloading Stations for Siege Artillery Matériel." "Formation and Service of the French Siege and Fortress Artillery."

BELGIUM.—*Bulletin de la Presse et de la Bibliographie Militaires*. Brussels: 15th June, 1905.—"Training of Officers, Education of Troops, and National Power" (*continued*). "The French Grand Eastern Manœuvres in 1904." "The Russo-Japanese War" (*continued*). 30th June.—Has not been received.

FRANCE.—*Revue du Cercle Militaire*. Paris: 3rd June, 1905.—"The Invasion of Provence, 1746-47." "The Russo-Japanese War" (*continued*).

"New Infantry Instructions." 10th June.—"New Infantry Instructions" (continued). "The Russo-Japanese War" (continued). "The Invasion of Provence, 1746-47" (continued). 17th June.—"The Russo-Japanese War" (continued). "The Invasion of Provence, 1746-47" (continued). "New Infantry Instructions" (continued). 24th June.—"The Russo-Japanese War" (continued). "The Invasion of Provence, 1746-47" (continued). "New Infantry Instructions" (continued).

Le Spectateur Militaire. Paris: 1st June, 1905.—"The Russo-Japanese War" (continued). "The Russo-Turkish Campaign of 1877-78" (continued). "The Drill Regulations of the 3rd December, 1904." "The Phantom Battery." "Military History and Organisation of Railways" (concluded). 15th June.—"The Grand Autumn Manœuvres in 1904." "The Russo-Japanese War" (continued). "The Russo-Turkish Campaign of 1877-78" (continued). "The Conquest of Menabe in Madagascar, 1897-1900."

Revue Militaire des Armées Étrangères. Paris: June, 1905.—"German Military Regulations of the 5th April, 1905." "Reorganisation of the English Army." "Military Reorganisation of China."

Revue d'Artillerie. Paris: June, 1905.—"Progress of Modern Field Artillery" (concluded). "Chronophotographic and Mathematical Study of the Horse's Paces" (concluded). "Note on the Designation of Objectives."

Journal des Sciences Militaires. Paris: May, 1905.—"To Reconcile Our Views." "Strategic Criticism of the Franco-German War" (continued). "Naval and Coast Studies" (continued). "A Modern Regulation." "Education and Instruction of the Company, with a View to Field Service" (continued). "Marches" (continued). "The Conquest of Valencia by the French Army of Aragon, 1811-12" (continued).

June, 1905.—"Some Lessons of the Russo-Japanese War." "The Weapon Used Unexpectedly" (concluded). "A Modern Regulation" (concluded). "Conception of the Modern Battle." "Naval and Coast Studies" (concluded). "The Fight of Villersexel, 9th January, 1871" (continued). "The War of Succession in Austria, 1740-48" (continued).

Revue du Service de l'Intendance Militaire. Paris: May, 1905.—"Alimentary Labiated Plants." "Russian Military Administration in Peace and War." "Analysis of a Method of Making Ration Bread." "Weight of Alcohol and Weight of Algerian Red Wine." "The Raising and Administration of a Regiment in 1813."

June, 1905.—"Colonisation in Tunis." "Chemical Breads." "Russian Military Administration in Peace and War" (continued). "An Army Administration of the 18th Century" (continued). "Care to be Taken with Barrels."

Revue du Génie Militaire. Paris: May, 1905.—"Notes on the Defence of Port Arthur, by an Eye-Witness." "The Railway from Kayes to the Niger" (concluded). "Portable Infantry Wire."

June, 1905.—Has not been received.

Revue d'Histoire. Paris: June, 1905.—"A Military Operation, by Eugene and Marlborough." "The Campaign of 1797 on the Rhine." "The War of 1870-71" (continued).

Revue de Cavalerie. Paris: June, 1905.—"The Battle of the Sikkak, the 6th July, 1836." "Cavalry in the Russo-Japanese War" (concluded). "Letters to Plok" (continued). "Cavalry in the Field" (continued).

GERMANY.—*Militär-Wochenblatt*. Berlin: 1st June, 1905.—“The Musketry Instructions of the English Army.” “The Hottentot Insurrection” (continued). “For the Gun-Shields.” 3rd June.—“The Hottentot Insurrection” (continued). “The Musketry Instructions of the English Army” (concluded). “Tactical Training of Officers and Non-Commissioned Officers in Bulgaria.” 6th June.—“The Betrothal of the Crown Prince.” “The Imperial German Navy List for 1905.” “The Surprise of the Forton French Cavalry Division on the 16th August, 1870.” 8th June.—“New English Service Regulations.” “Reconnoitring Patrols.” “Impressions of the Japanese Army.” 15th June.—“The Military Medical Condition of South-West Africa, during the Native Rebellion of 1904-05.” “Observations on the Article, ‘On Cavalry Training.’” “The Cretan Gendarmerie.” 17th June.—“Remarks on the Article, ‘Musketry Training.’” “The Military Medical Condition of South-West Africa, during the Native Rebellion of 1904-05” (concluded). 20th June.—“From the Life of a Youthful Knight of the Order of Merit.” “The English Field Gun.” 22nd June.—“Military Map Criticism.” “Japanese Fortress Artillery.” 24th June.—“The Russo-Japanese War” (continued). “Intelligence from the Belgian Army.” 27th June.—“On the Battle of Langensalza, on the 27th June, 1866.” “Krupp at the Lüttich Exhibition.” “The Strength of Outposts.” 29th June.—“Military Handbook of Bavaria.” “Japanese Secrecy and Stratagem.” “Intelligence of the Austro-Hungarian Forces.” “Defences of Lisbon.”

Internationale Revue über die gesamten Armeen und Flotten. Dresden: June, 1905.—“Military and Naval Intelligence from Austria-Hungary, Bulgaria, France, Germany, Great Britain, Italy, Japan, Persia, Portugal, Russia, Spain, Sweden, Switzerland, Turkey, and the United States.” Supplement 63.—“The Military Situation in Central Asia.” French Supplement 75.—“The German Mobilisation in 1870-71.” “The Problem of Length of Recoil on Gun Carriage of Field Howitzers.” “Horse Transport by Sea.” “The Forthcoming Rearmament of German Field Artillery.” “Primary School and the Army.” “A Means of Retaining the Complete Combative Power of Artillery in Battle, as long as Possible.”

Neue Militärische Blätter. Berlin: May, 1905. No. 19.—“Echoes from the French Army.” “Where is England Vulnerable?” “The Coming Naval Programme.” “Mobile Field Kitchens in the Russian Army.” “Importance of Formosa, Especially as regards its Strategic Position.” “Military Intelligence.” No. 20.—“Observations on the Increase of the Peace Effective of Officers of the German Army.” “Albanians in War.” “Reflectors.” “Military Intelligence.” No. 21.—“Port Arthur and the Citadel Question.” “Reflectors” (concluded). “An Explanation.” “Mapping.” “Military Intelligence.”

June, No. 22.—“The Military and Political Importance of the Two Years’ Period of Service in the French Army.” “Maintenance and Clothing of the Manchurian Army.” “The Two Hostile Navies.” “On the Military Tax Question.” “The Defence of Indo-China.” “Military Intelligence.”

Jahrbücher für die Deutsche Armee und Marine. Berlin: June, 1905.—“Preparatory Reconnaissance of Covered Artillery Positions.” “The Army of the Iser from its Deployment to the Battle of Königgrätz.” “The Musketry Training of Infantry.” “French and German Discipline.” “The Maintenance of Pensioners and Imperial Defence Tax.” “Germany and England in South Africa.” “Russia and the Russo-Japanese War” (continued).

ITALY.—*Rivista di Artiglieria e Genio*. Rome: April, 1905.—“On the Calculation of the Elasticity of the Springs in Recoil Carriages.” “On the Equilibrium of Flying Machines.” “The Influence of the Daily Rotation of the Earth on Artillery Fire at Long Ranges.” “The Russo-Japanese War, 1904” (*continued*). “The Work of Artillery in the Decisive Attack.”

May, 1905.—“The Russo-Japanese War, 1904” (*continued*). “The Command of the Artillery in the Grand Units in War.” “Radio-Activity and Modern Science.”

Rivista Militare Italiana. Rome: June, 1905. — Has not been received.

PORTUGAL.—*Revista de Engenharia Militar*. Lisbon: May, 1905.—“Divisional Bridge Parks.” “Improvements Effected at Fort Caxias.” “The Principal Civil Engineering Works Carried out in Portugal and the Colonies in 1904.”

Revista de Infantaria. Lisbon: June, 1905.—“The Infantry Arm.” “Machine Guns in Different Armies.” “A Desperate Situation.” “Colonial Military Organisation.” “Pay and ‘Gratuities.’” “Mounted Infantry.”

RUSSIA.—*Voïennyi Sbornik*. St. Petersburg: June, 1905.—Has not been received.

SPAIN.—*Memorial de Ingenieros del Ejército*. Madrid: April, 1905.—“Cervantes and the Engineers of the Army.” “Ravelin and Cavaliers.” “The Movement of Water in the Canaries: Choice of a Formula.” “Foreign Notes.”

Revista Técnica de Infantería y Caballería. Madrid: 1st June, 1905.—“A Page in the History of the Regiment of the Princess.” “The Paucity of the Militia.” “Stature in Relation with Recruiting.” “The Russo-Japanese War.” “An Historical Remembrance: *The Empecinado*” (*concluded*). “Machine Guns in the Field” (*concluded*). “For Want of Cavalry” (*continued*). 15th June.—“A Special Military School for Infantry and Cavalry.” “Paucity of the Militia” (*concluded*). “Stature, Chest Measurement, and Weight in Relation with Recruiting.” “For Want of Cavalry” (*concluded*). “On our Oversea Campaigns.” “Quarters and Socialism.”

Revista Científico-Militar y Biblioteca Militar. Barcelona: June, 1905.—“The Foreign Tour of His Majesty the King.” “Correspondents in the Theatre of War.” “The Cultivation of Military History.” “The Defence of Port Arthur, according to an Eye-Witness.”

SWITZERLAND.—*Revue Militaire Suisse*. Lausanne: June, 1905.—“Tactical Flanking Positions” (*concluded*). “The Army and Sport” (*continued*). “The American Rifle, Model 1903.” “New Tactical Instructions for the Italian Artillery.” “Sham Fights.”

UNITED STATES.—*The United Service*. New York: June, 1905.—“The Rural Guards of Cuba.” “A Congressional Intrusion.” “Strategy and Tactics of the Russo-Japanese War.” “The Lieutenant’s Dilemma.” “Garcia.” “The After-Dinner Oratory of America.” “The Enchanted Isle.” “Our Contemporaries.” “Service Salads.” “Presley Marion Rixey, Surgeon-General U.S. Navy.”

NOTICES OF BOOKS.

Kriegskunst in Aufgaben (Problems in the Art of War). Vol. II., Vorposten, Märsche, etc. (Outposts, Marches, and their Security.)
By Lieut.-General G. VON ALTEN. Berlin: Mittler, 1904. M. 3-50,
with 2 lithographic maps.

In the JOURNAL for March, 1904, we reviewed Vol. I. of these instructive exercises in Applied Strategy and Tactics. This dealt with, the *Aufklärung*, or Advanced Reconnaissance of a Cavalry Brigade covering an Army Corps, marching eastward across the Vistula, to meet an invading force moving westward, and described in detail the action of the advanced and detached squadrons, patrols, etc., on the march. In the present volume, the same general idea is followed out, but the description of the work of the Cavalry is continued by that of the Army Corps.

In Part I. the outpost dispositions of the advanced Cavalry when halted are given, the reasons for each step taken being, as before, discussed in detail. Their march from 5 a.m. on a certain day in May (with their adventures in feeling for the enemy), up to 5 p.m., is depicted; then the considerations influencing the dispositions for the night by the brigade and regimental commanders, and the means taken by each of the three squadron commanders of the leading regiment are described. (One squadron is left behind as divisional cavalry, with the 1st Infantry Division). The movements of a detached contact patrol and its night dispositions, with the many points the lieutenant commanding it has to weigh, are well sketched. In all this, though the points are here and there somewhat laboured and repetitions occur, the author shows himself a master of Cavalry detail. He is apparently not one of the old school, wedded entirely to the *arme blanche*, but quite alive to the advantages of the rifle (or rifled carbine) and to dismounted action. He discusses the disposal of the horses of the dismounted men, and goes into the difficulty of carrying their lances, the inconvenience of which to cavalry reconnoitring here receives practical illustration. He insists on the defence of outposts by firearms alone,¹ and complains of the insufficiency of the number of rounds carried by the German Cavalry.

The author advocates the cantoning of the outposts in preference to bivouacking. He deprecates the practice of constant patrolling at night; standing patrols well forward, with occasional patrolling only, being less harassing, yet efficient.

A spirited account is given in this part of a night attack by some of the enemy on a bridge held by the cavalry outposts, and of its issue.

The effect the use of motor cars and motor bicycles for important messages to spare despatch riders, and the wear and tear of horse-flesh, and especially to treble the speed with which intelligence can be conveyed, is gone into at some length. The writer does not, however, favour the use of ordinary bicycles with cavalry, whose rapid movements he considers they hamper; but he advocates a larger supply with an Infantry

¹ The German Cavalry outpost practice is governed by special rules, somewhat similar to those of our old Cavalry Drill Regulations. Our mounted troops on outpost duty now act on the same principles as those laid down in "Infantry Training."—REVIEWER.

Division, and thinks they should march in front of its leading troops with the Staff.

In Part II., the disposition of an Army Corps on the march on one main road is shown, and the methods taken to ensure its safety to keep off the prying eyes of the enemy's scouts, and keep up communication with its own advanced cavalry, are shown. The baggage arrangements are discussed in detail, and calculations, showing the difficulty of supply of the leading troops in the case in point, are made. Short detailed orders by the commander of the leading Infantry Division, and by the commander of the Advanced Guard, are given. The advantage of the arrangement by which the latter is usually the Brigadier-General commanding the leading Infantry Brigade, are pointed out.

The arrangements, by which the squadron leader of the Cavalry Brigade left behind as divisional cavalry keeps up communication with the advanced cavalry, are discussed; but the commander of the Division seems to do it all himself. He pushes forward the greater portion of the squadron to keep touch with the advanced cavalry (now 9 miles to the front and to a flank, and has nearly all the remainder employed as flanking detachments).

The author discusses all this in an instructive manner, objecting strongly to cavalry being tied to infantry. He severely criticises the new-fangled mounted rifles (*Jäger-Schwadronen*), which are only armed with swords and revolvers, and evidently does not think them worth their peculiar uniform. The author rightly makes the Divisional General very active in personal reconnoitring, riding well forward to see everything for himself. The Advanced Guard commander's orders are instructive, but seem too long, especially the para. as to the enemy's doings, for the situation is changing every hour. However, he has to arrange for the cantoning of each unit of the Advanced Guard when it halts. As he has to throw out outposts to cover the Army Corps also, he has his work cut out for him.

In Part III., the cantoning of an Army Corps when near the enemy is shown, and the disposition of the mixed outposts to secure its rest detailed. In this, as throughout, the author is careful to state that other arrangements might be equally good, but the reasons for his are given, and the process of reasoning by which each commander of an Outpost Company arrives at the decisions governing his dispositions is followed out. He criticises that part of the German "Regulations for Field-Service" (*Felddienst-Ordnung*), which says the Commander should give certain general directions as to the conduct of outposts on attack. This, he says, leads to such cut and dried orders, as:—"In case of attack, the outposts are to hold their ground until reinforced by the Reserves," or:—"In case of attack, the Line of Picquets is to be held," and gives as his reason that no commander can order beforehand what is to be done in every case, as he does not himself know what the enemy will do, and he does not probably know enough of the country, in a case such as here imagined, to foresee what he will do. "Thus, to fetter the action of the commanders of outpost companies is a mistake, and impairs their initiative and energies. The leaders are there, and they will do their duty. Their duty is fulfilled when they prevented the surprise of the main-body. How they are to do this may be left to them. The injunction complained of should be omitted, and it might be left to the Commander of the troops on the spot to give such instructions when special cases require them." Regarding this, which is true in theory, it may be remarked that the leaders may be killed, and

that experience in war shows that some such general instructions as to the intended line of action a commander desires, to enable him to attain his object, lessen the chances of confusion and acting at cross-purposes.

On the whole, this volume is as useful as its predecessor, and, as it represents the methods generally followed in the German Army, it will be of good service to the many British officers of all arms who now study German, and can work patiently through it.

If some of these of recent war experience are encouraged thereby to publish similar works in English, so much the better for the British Army.

In any case, the careful precautions here inculcated by the author to guard the flanks of marching bodies, even when screened by advanced cavalry, and the methods of doing it, as well as all other means of avoiding surprise, may be studied with advantage by British officers in this practical piece of work.

PRINCIPAL ADDITIONS TO LIBRARY FOR JUNE, 1905.

1814. By H. HOUSSAYE. 8vo. 49^{ème} Edition. (Perrin et Cie.) Paris, 1905.

The Saint Lawrence Basin. By S. E. DAWSON. Exploration Series. 8vo. (Lawrence and Bullen, Ltd.) London, 1905.

Vues des Champs de Bataille de Wissembourg et de Frœschwiller 4 et 6 Août, 1870. By Capitaine H. FAMELART. Oblong folio. 5s. (R. Chapelot et Cie.) Paris, 1905.

Russia as it Really is. By CARL JOUBERT. 8vo. 7s. 6d. (Eveleigh Nash.) London, 1904.

The Invasion of India by Alexander the Great. By J. W. M'CRINDLE. 8vo. 6s. (Archibald Constable & Co.) London, 1893.

Tibet and Nepal. By A. H. SAVAGE LANDOR. 8vo. 20s. (A. & C. Black.) London, 1905.

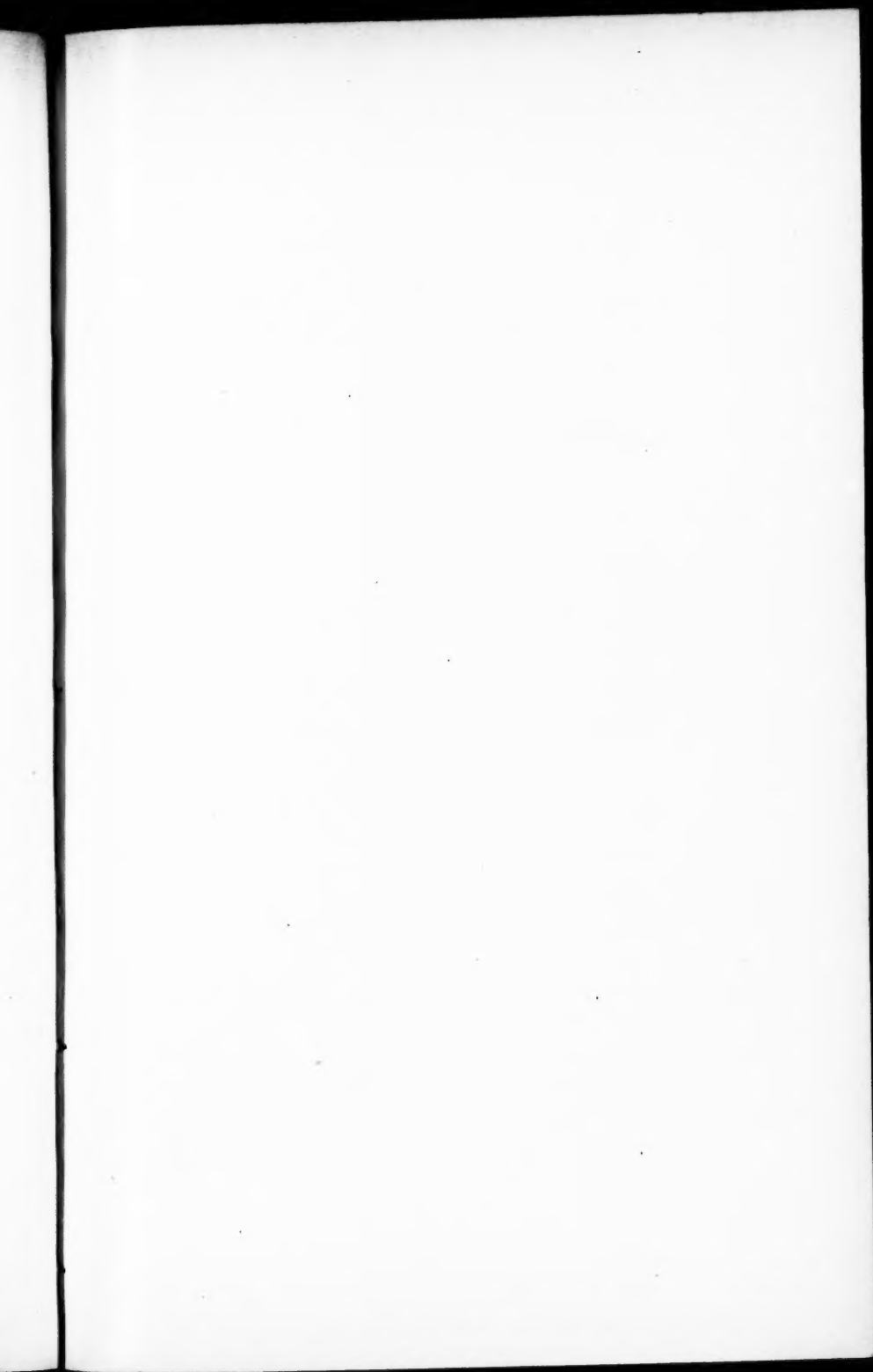
The Land Forces of the British Colonies and Protectorates. Compiled in the Intelligence Division, War Office, 1902. Revised by the General Staff, War Office. 8vo. London, 1905.

A History of the Imperial Service Troops of Native States. By Brigadier-General S. BEATSON. 8vo. Calcutta, 1903.

Army Medical Department, Report for the Year 1903. Vol. XLV. 8vo. 2s. (Presented.) (Harrison & Sons.) London, 1905.

Annual Report of the Board of Regents for the Year Ending 30th June, 1903. United States Smithsonian Institution. 8vo. (Presented.) Washington, 1905.

Military Operations and Maritime Preponderance. By Colonel C. E. CALLWELL. 8vo. (Presented.) (William Blackwood & Sons.) London, 1905.

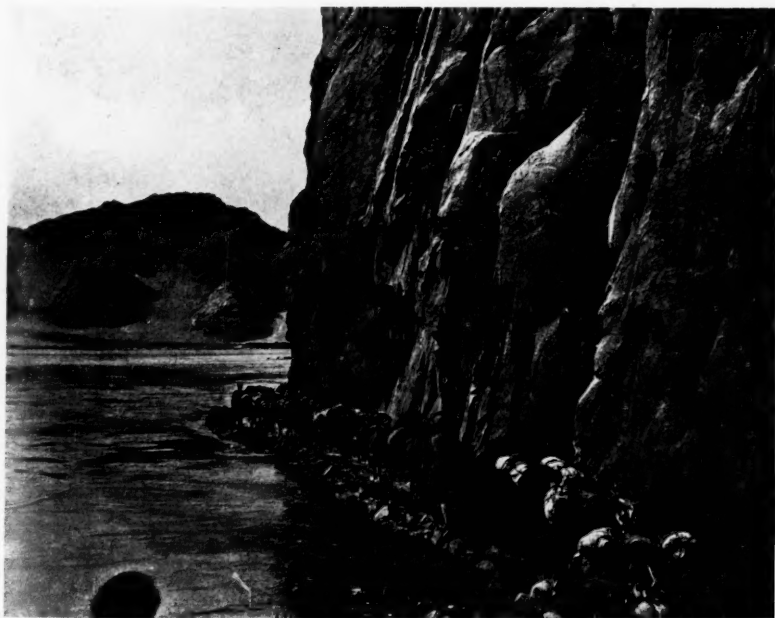




THE BARR AND STROUD INFANTRY RANGEFINDER



CHIEF ENTRANCE TO LHASA, THE "PARGO KALING."



ON THE MARCH TO LHASA BETWEEN THE BRAHMAPUTRA AND LHASA.

TO LHASA WITH THE TIBET EXPEDITION, 1903-04.